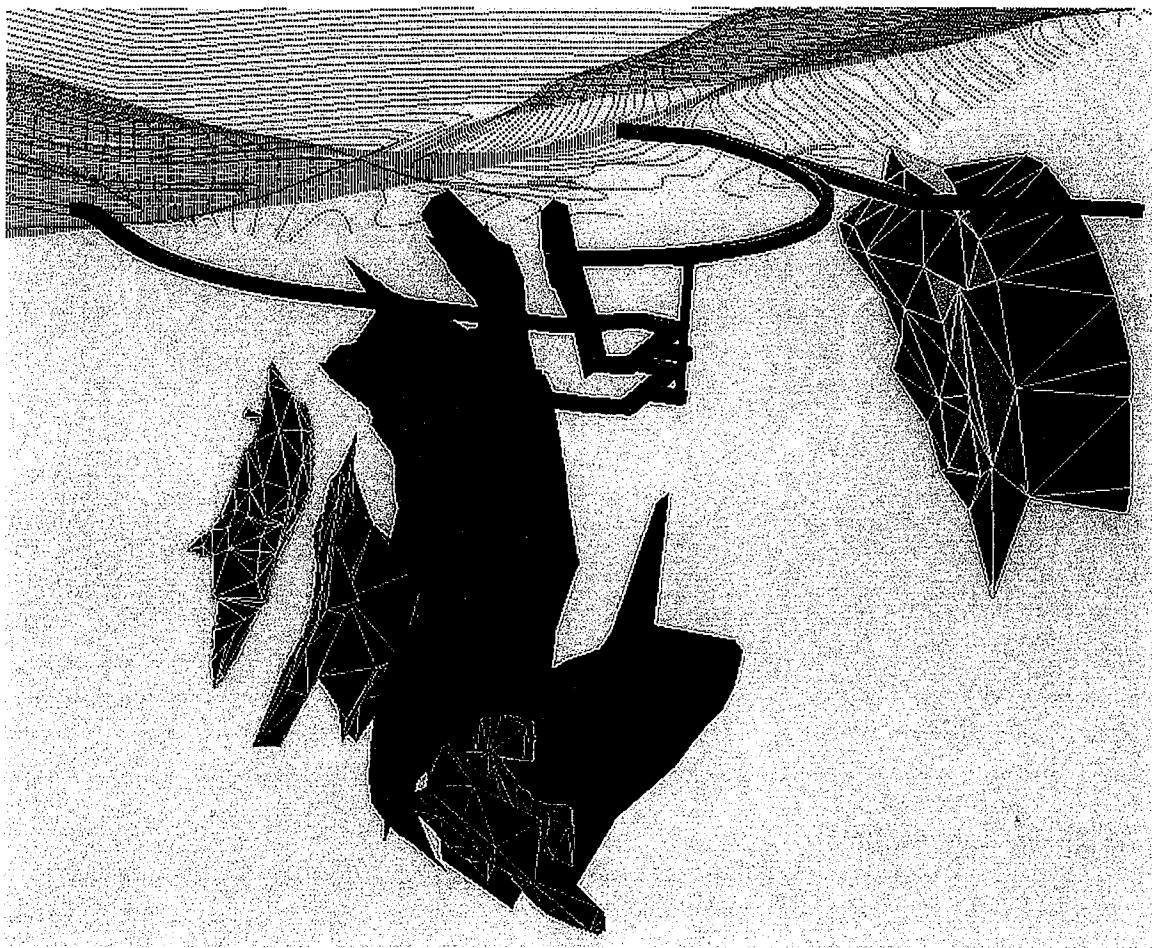


**Appendices for
Golden Dream Underground Exploration and Bulk
Sample Program, Elkhorn Project, Jefferson
County, Montana**

The revised and completed application for an amendment to
Exploration License #00617
April 21, 2006



Volume II

Appendices

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Appendix 1:

Summary of Information Regarding Non-Ore Rock Geochemistry

Appendix 1:

Summary of Information regarding Non-Ore Rock Geochemistry

Exploration drilling has been ongoing at the Elkhorn project since the 1980's. Since the original plan at Elkhorn was for one or a series of open pit mines, a significant amount of drill data was collected. Much of this information is concentrated on the ore zones to determine the character of the ores, but there is also a significant amount of information on the country rocks. Some of this drill data is pertinent to assessing the geochemical character of the country rock in the area of the workings now proposed at the Golden Dream ore body.

Instead of collecting data on actual acid-base measurements, the data collected included measuring the percentages of reduced sulfur, sulfate sulfur, oxide iron, reduced iron, and carbonate. In addition, several trace elements were collected including silver, copper, lead, zinc, arsenic, bismuth, cobalt, manganese, molybdenum, tellurium, and tungsten. This information can be used with some degree of confidence to assess the geochemical character of the rock on the proposed underground exploration plan.

First the acid generation potential (AGP) (expressed as tons CaCO₃ per 1000 tons) is calculated by multiplying the percentage of reduced sulfur by 31.25. The neutralizing potential (NP) is calculated by converting the percentage of carbonate to tons CaCO₃ per 1000 tons by multiplying by 16.67. The net neutralizing potential (NNP) is then calculated by subtracting the AGP from the NP. Typically rock type with a NNP of anything more than 20 is considered alkaline and anything less than -20 is considered to be likely acid producing with values in the middle being indeterminate.

There are some significant assumptions being made with this method. We are assuming that all of the reduced sulfur is present as sulfides, and all of the carbonate is present as calcium carbonate. We are planning a future program of ABA analyses of the excavated rock using a modified Sobek AB, which should validate the assumptions or identify potential problems before acid drainage occurs.

For this exercise, 511 samples from 16 drill holes that are located near or in the Golden Dream ore body were chosen because of their proximity to underground workings and the presence of geochemical data. The data were separated by rock typed and a mean taken of the samples to determine the NNP of each rock type.

The following rock types are present in the area near the Golden Dream deposit.

Oxidized Gouge: This material is usually brown or reddish brown, fine to coarse grained, clay with variable amounts and types of rock fragments. It is usually completely oxidized.

Hornfels: These are rocks with a limestone, calc siltstone or siltstone protolith that have been metamorphosed to pyroxene, garnet, calcite, wollastonite, quartz and mica. Little or no sulfides are present.

Marble: These rocks are recrystallized limestone and vary in crystal size from very fine to coarse

Exoskarn: Exoskarns are rocks of sedimentary protolith that have been subjected to the transfer of elements with an adjacent intrusive body. They generally contain hydrous silicates of epidote, idocrase, axinite, chlorite as well as varying amounts of pyroxene, garnet, calcite, wollastonite, quartz and mica. Sulfides vary from non-existent to 10% or more and can grade into massive sulfide ores.

Endoskarn: Endoskarns are rocks of igneous origins that have been subjected to transfer of elements with the adjacent sedimentary rocks; they generally contain fine-grained pyroxene quartz and calcite, with epidote, idocrase, and axinite. Sulfides vary from non-existent to 10% or more and can grade into massive sulfide ores.

Diorite: Black, equigranular, fine to medium grained pyroxene diorite.

Monzonite: Gray, medium-to-coarse-grained, quartz-plagioclase-orthoclase-biotite-hornblende quartz monzonite with medium phenocrysts of orthoclase and hornblende.

Ore types: There are several different ore types at Golden Dream all of which contain economic concentrations of gold and/or copper.

Oxide ore is found in shallow areas of the deposit and contains red or reddish brown clay, often with jasperoid and minor malachite.

Pyrrhotite ore is dominated by the presence of pyrrhotite but usually also has chalcopyrite, magnetite, and pyrite along with varying amount of calc-silicates and silicate gangue minerals

Magnetite ore is dominated by the presence of massive, coarsely crystalline magnetite, possibly with pyrite and vonsenite (an iron borate) along with varying amounts of calc-silicates and silicate minerals.

Table 1: Estimated Amounts of each Rock Type to be Produced from Exploration Workings

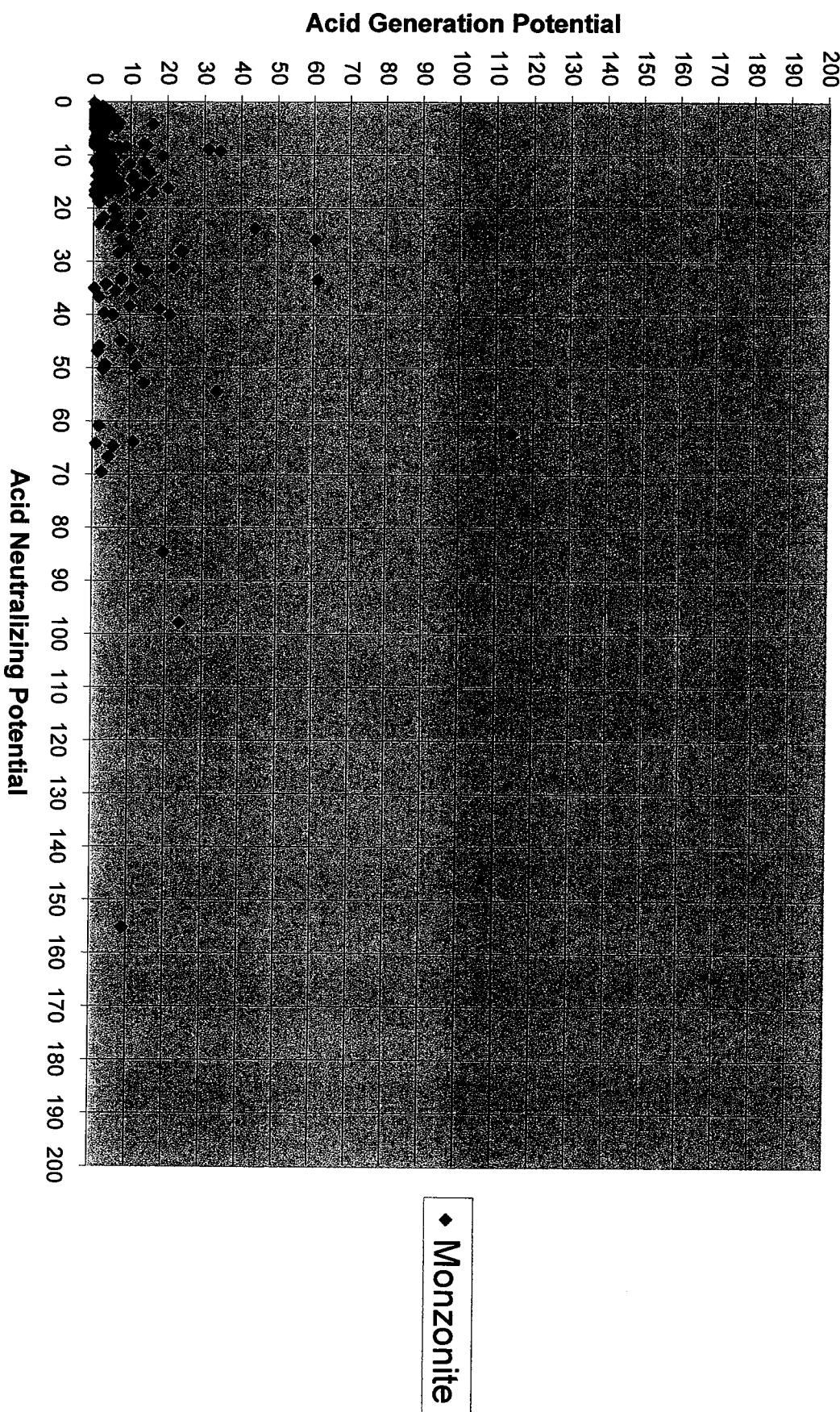
Non Ore Rock Type	Main Decline (lcy)	Ventilation Workings (lcy)	North Access (lcy)	Associated Development	Subtotal (lcy)
Qtz Monzonite	13,123	89	0	2,847	16,059
Hornfels	4,192	4,809	1,452	2,263	12,716
Diorite	0	3,777	3,775	1,606	9,158
Endoskarn	912	1,313	581	585	3,391
Exoskarn	0	0	0	0	0
Marble	0	0	0	0	0
Total	18,227	9,988	5,808	7,301	41,324

The results of the data are presented in the following pages.

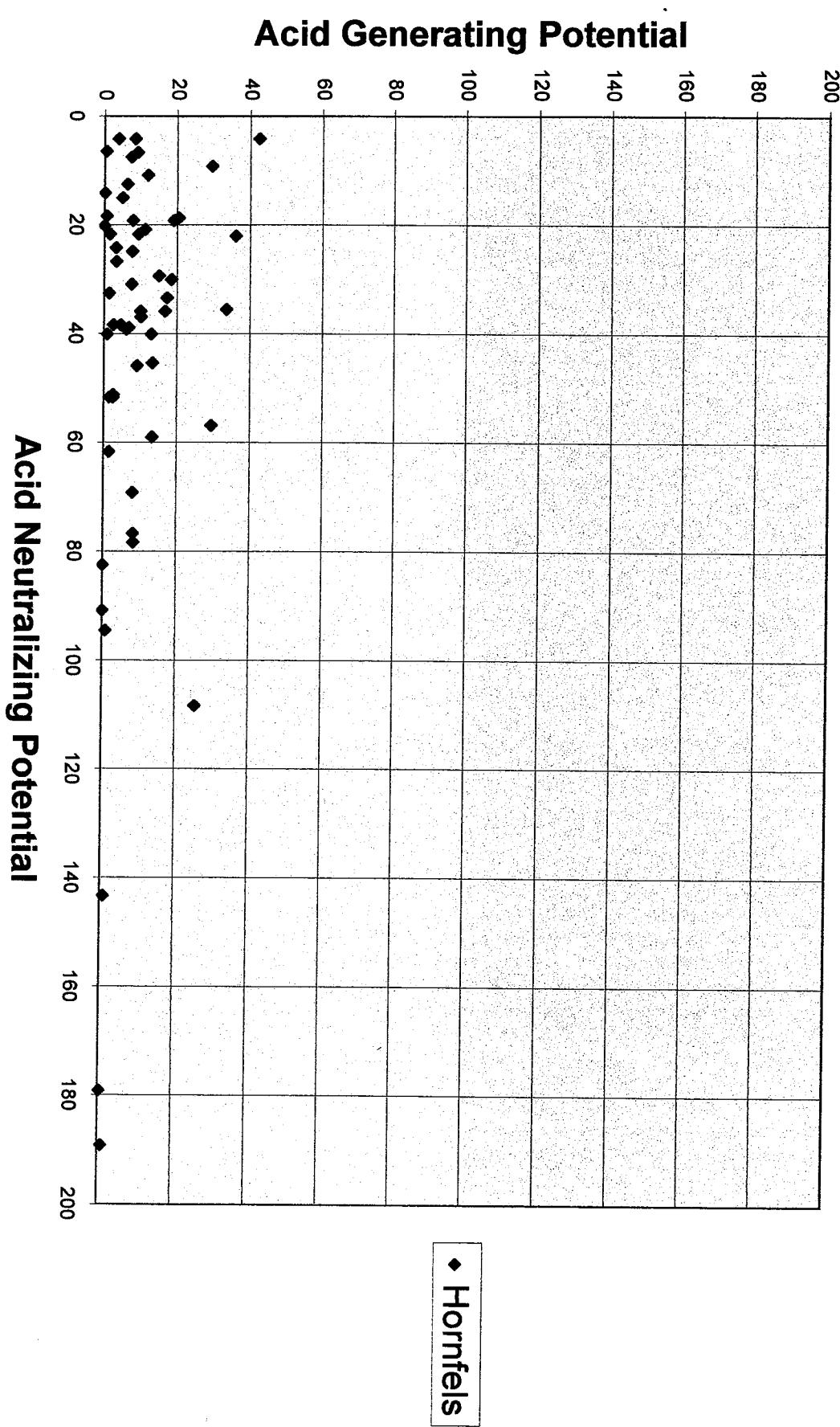
Rock Geochemical Information from Selected Holes in and near Golden Dream Orebody

	Number of samples	Number of drill holes	Gouge						Sulfide - Magnetite Ores					
			7	11	60	21	Monzonite	Endoskarn	Exoskarn	Oxidized Ores	17	83		
Net Neutralizing potential (NNP)	Mean	53.6	575.5	37.3	-0.4	9.6	-0.6	7.5	27.6	-127.2				
	High	143.8	982.8	240.7	61.7	146.3	186.8	376.2	78.9	-526.4				
	Low	0.4	38	-38.3	-36.2	-52.0	-199.7	-177.6	3.0	491.8				
Acid generating potential AGP	Mean	1.2	12.1	9.6	11.6	5.9	32.0	42.2	5.7	165.0				
Acid Neutralizing potential NPP	Mean	54.8	587.6	46.9	11.2	15.6	31.3	49.8	33.2	37.8				
Ag (ppm)	0.8	1.1	1.1	0.4	0.7	2.7	1.9	6.4	1.5					
Cu (ppm)	744	741	127	96	92	800	1,224	3,149	3,618					
Pb (ppm)	119	42	46	29	29	61	56	173	51					
Zn (ppm)	264	288	165	93	86	266	277	355	462					
As (ppm)	863	77	98	160	124	176	89	1,262	100					
Bi (ppm)	12	1	1	0	0	7	8	28	20					
Co (ppm)	14	4	8	9	7	15	9	36	51					
Mn (ppm)	1,437	831	565	508	380	1,283	1,167	2,173	2,379					
Mo (ppm)	4	1	2	2	5	5	3	8	6					
Te (ppm)	0	0	0	0	0	0	0	0	0					
W (ppm)	16	3	8	6	4	5	7	20	10					

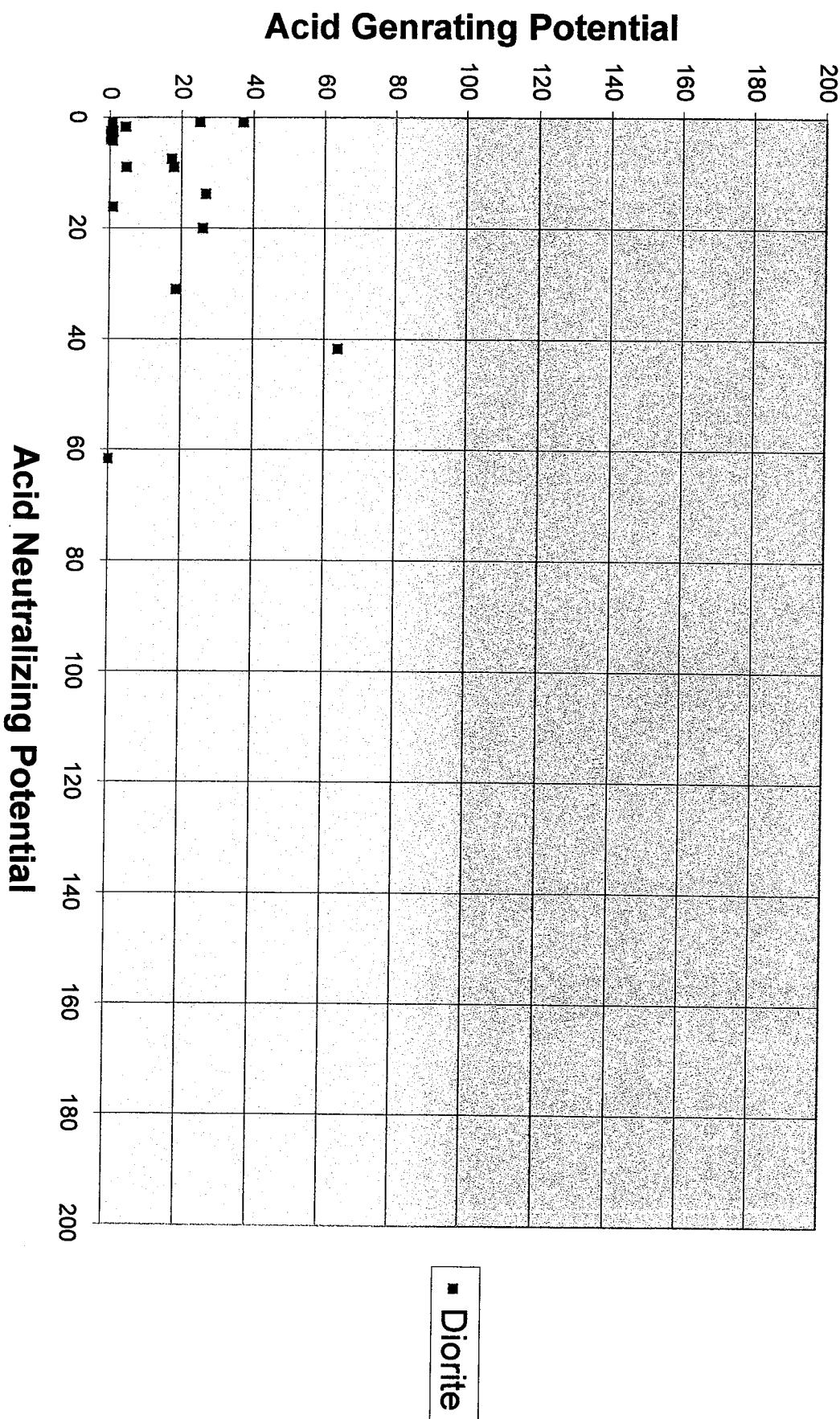
Monzonite



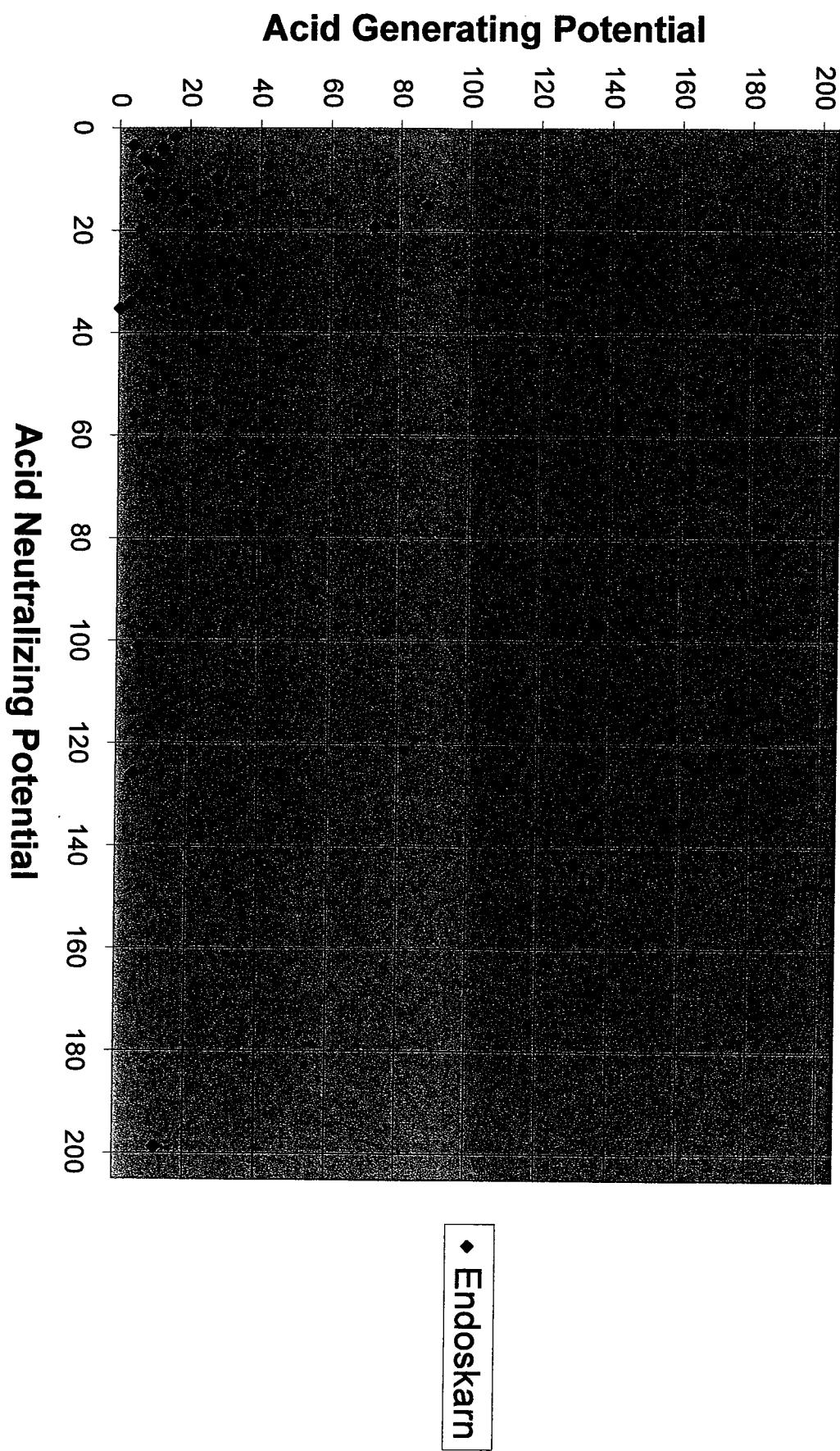
Hornfels



Diorite



Endoskarn



HoleId	From	To	Length	1%	fec	s%	sc4%	sc5%	cc3%	Code	Lithology	NP	Np-AP	AG	CU	PB	ZN	AS	Bi	Co	Mn	Mo	Tc	W	
CEH0262	40	60	20	7.08	10	0.01	0.02	0	3.7	24	Dolomite	0.0	61.7	61.7	0	20	43	105	101	9	4	825	2	0	
CEH0262	60	80	20	3.95	10	0.02	0.02	0.01	2.3	10	Marble	0.3	38.3	38.0	0.6	144	343	348	486	1	7	3085	4	0	
CEH0262	80	100	20	2.91	13	0.02	0.02	0.01	0.29	27	Monzonite	0.3	4.8	4.5	0	129	43	120	397	2	11	785	3	0	
CEH0262	100	120	20	5.02	13	0.01	0.02	0.02	0.19	27	Monzonite	0.0	3.2	3.2	0	146	43	203	675	1	18	1028	3	0	
CEH0262	120	135	15	6.08	13	0.01	0.02	0.02	0.48	27	Monzonite	0.0	8.0	8.0	0	288	48	178	828	1	19	680	5	0	
CEH0262	135	148	13	31.26	4	0.02	0.03	0.01	4.74	67	Oxide Ore	0.2	79.0	78.9	31.5	12813	103	440	1991	61	121	6070	15	0	
CEH0262	148	165	17	35.29	3	0.01	0.01	0.01	2.27	67	Oxide Ore	0.3	37.8	37.5	41.5	10846	212	639	3431	73	79	6272	20	0	
CEH0262	165	185	20	5.04	2	0.02	0.02	0.01	2.8	67	Oxide Ore	0.3	46.7	46.4	8	4489	248	662	3580	43	48	2760	20	0	
CEH0262	185	205	20	2.25	10	0.02	0.02	0.02	0.24	67	Oxide Ore	0.3	4.0	3.7	0.5	128	64	132	395	1	1	289	1	0	
CEH0262	205	225	20	2.22	5	0.02	0.02	0.01	0.14	27	Monzonite	0.0	2.3	2.3	0	33	15	47	100	1	1	663	5	0	
CEH0262	225	240	15	2.26	5	0.02	0.02	0.01	0.48	27	Monzonite	0.3	8.0	8.0	0	233	3	3	100	1	1	233	3	0	
CEH0262	240	255	15	1.97	2	0.01	0.02	0.01	0.28	27	Monzonite	0.3	2.9	2.9	0	87	9	34	43	1	1	252	2	0	
CEH0262	255	275	20	2.44	2	0.01	0.01	0.01	0.28	67	Oxide Ore	0.3	4.8	4.8	0	138	22	49	74	1	5	194	1	0	
CEH0262	275	295	20	15.94	3	2.15	0.21	0.08	6.65	67	Oxide Ore	0.3	4.7	4.4	232	45	96	98	189	9	18	289	1	0	
CEH0262	295	310	15	6.5	2	0.02	0.03	0.01	0.24	67	Oxide Ore	0.3	4.0	3.7	0.5	13175	428	662	1122	136	23	1763	4	0	
CEH0262	310	330	20	5.2	10	0.02	0.02	0.01	4.42	67	Oxide Ore	0.2	4.0	3.8	0.8	87	857	386	361	17	4	310	3	0	
CEH0262	330	340	10	0.58	2	0.08	0.03	0.05	58.04	10	Marble	0.3	73.7	73.4	0	84	102	184	157	5	4	310	4	0	
CEH0262	340	395	15	5.94	0	0.01	0.02	0.01	3.46	52	Exoskam	17.7	40.0	40.0	0	158	0	158	0	0	0	505	0	0	
CEH0262	395	415	20	4.86	0	0.08	0.07	0.98	3.41	52	Exoskam	29.5	56.8	56.8	0	57	45	45	162	6	7	427	3	0	
CEH0262	415	435	20	3.16	0	0.23	0.07	0.21	0.29	27	Monzonite	6.1	4.8	-1.3	0	35	10	42	41	1	10	252	3	0	
CEH0262	435	445	10	3.1	0	0.81	0.07	0.79	7.68	27	Monzonite	24.2	28.0	3.8	0	40	27	58	67	1	10	485	4	0	
CEH0262	445	480	20	3.85	0	0.06	0.07	0.68	1.15	19.2	19.2	0.0	0	211	25	25	58	2	12	680	5	0			
CEH0262	480	500	20	5.09	0	0.03	0.07	1.01	9.65	52	Exoskam	31.1	159.2	128.1	0	696	19	126	220	1	13	854	3	0	
CEH0262	500	587	13	28.1	0	0.38	0.07	0.36	10.18	64	Vonsenile-maf	10.8	169.7	168.9	3.5	2043	53	369	86	1	1	1300	10	0	
CEH0262	587	595	15	12.2	0	0.05	0.08	0.03	30.28	64	Vonsenile-maf	13.1	504.9	481.8	2.5	1324	0	246	0	1	1	718	2	0	
CEH0262	595	615	20	25.85	0	1.5	0.12	1.46	3.22	64	Vonsenile-maf	45.0	53.7	53.7	0	2483	40	261	109	18	40	2615	5	0	
CEH0262	615	635	20	0.57	0	0.16	0.03	0.15	41.33	10	Marble	4.5	689.0	684.4	0	218	0	41	0	3	0	349	0	0	
CEH0262	635	650	15	2.98	0	0.81	0.08	0.78	35.81	10	Marble	24.1	597.0	572.9	1.2	1108	0	315	0	2	0	816	0	0	
CEH0262	650	670	20	10.32	0	0.28	0.18	0.27	10.78	64	Vonsenile-maf	85.0	171.7	171.7	0	2123	17	209	70	23	11	1676	10	0	
CEH0262	670	680	20	28.85	0	4.1	0.18	0.04	0.42	64	Vonsenile-maf	125.3	7.0	-118.3	1.5	4788	38	327	107	16	40	3006	8	0	
CEH0262	680	710	20	33.96	0	6.93	0.15	6.88	0.28	64	Vonsenile-maf	214.2	4.7	-209.6	0.5	3149	36	510	85	9	57	3642	6	0	
CEH0262	710	724	14	34.62	0	9.75	0.21	9.68	0.37	64	Vonsenile-maf	301.4	6.2	-285.2	2	5874	46	569	100	8	71	2978	7	0	
CEH0262	724	739	15	2.83	0	1.62	0.12	1.58	0.48	62	Magnetite Sulf	48.8	8.0	-40.7	0.5	1048	21	674	109	18	40	3085	8	0	
CEH0262	739	755	16	4.83	0	0.38	0.06	0.36	6.63	52	Exoskam	10.9	9.8	-2.1	0	299	19	19	287	22	1	37	3085	8	0
CEH0262	755	763	8	16.43	0	4.09	0.14	4.04	1.01	64	Vonsenile-maf	125.8	18.8	-108.8	0.8	2388	0	661	0	1	1	912	3	0	
CEH0262	763	778	15	6.61	0	1.11	0.07	1.09	3.26	27	Monzonite	33.6	54.3	20.8	0	346	33	204	177	0	1	38	3007	6	0
CEH0262	778	805	17	5.53	0	3.39	0.08	0.36	25.1	9	Gouge	0.3	3.3	3.0	0.6	105	138	195	288	0	6	574	3	0	
CEH0262	805	822	18	47.3	0	0.88	0.11	0.84	0.67	64	Vonsenile-maf	42.2	48.4	376.2	0	144	16	88	176	0	6	381	2	0	
CEH0262	822	840	14	30.9	0	1.45	0.13	1.41	0.72	64	Vonsenile-maf	43.3	12.0	-31.1	1.6	1262	62	859	38	37	127	133	0	0	
CEH0262	840	854	14	2.46	0	0.38	0.04	0.38	0.98	27	Monzonite	11.6	48.7	38.1	0.5	1571	41	1182	30	1	50	3066	9	0	
CEH0262	854	941	15	7.22	13	0.05	0.02	0.04	8.7	9	Gouge	1.3	143.8	143.8	1	53	28	48	119	5	6	912	6	0	
CEH0262	941	135	20	3.64	2	0.07	0.02	0.01	0.2	27	Monzonite	0.0	2.5	2.5	0.5	105	79	385	433	0	1	297	3	0	
CEH0262	135	275	20	1.67	2	0.07	0.02	0.06	0.45	27	Monzonite	0.3	3.0	3.0	0.6	105	138	195	288	0	6	295	3	0	
CEH0262	275	285	20	5.91	2	0.07	0.02	0.01	0.2	27	Monzonite	0.0	2.5	2.5	0.5	105	138	195	288	0	6	295	3	0	
CEH0262	285	315	20	1.87	2	0.07	0.03	0.06	0.3	27	Monzonite	0.3	347.0	347.0	1	17	36	57	0	7	213	2	0		
CEH0262	315	335	20	1.73	0	0.08	0.03	0.05	0.35	27	Monzonite	0.0	4.2	4.2	0.1	17	3	34	40	0	6	127	3	0	
CEH0262	335	355	20	1.8	2	0.01	0.02	0.01	0.15	27	Monzonite	0.2	2.5	2.3	0.1	12	14	31	36	0	3	255	2	0	
CEH0262	355	373	18	1.68	0	0.08	0.02	0.07	0.5	27	Monzonite	0.3	3.0	3.0	0.1	12	4	38	16	0	1	297	3	0	
CEH0262	373	393	20	1.85	0	0.07	0.03	0.06	0.27	27	Monzonite	1.1	5.8	4.7	0.1	18	1	27	23	0	2	297	3	0	
CEH0262	393	410	17	3	0	0.1	0.03	0.09	1.3	27	Monzonite	1.7	46.8	44.1	0.6	22	12	36	57	0	7	304	3	0	
CEH0262	410	430	20	3.17	0	0.13	0.04	0.12	0.2	27	Monzonite	3.4	3.3	3.3	0.1	70	30	49	102	0	8	382	3	0	
CEH0262	430	450	20	2.75	0	0.2	0.06	0.18	0.2	27	Monzonite	6.3	5.3	5.3	-0.1	62	24	92	133	0	7	425	4	0	
CEH0262	450	450	20	2.75	0	0.2	0.06	0.18	0.2	27	Monzonite	6.3	5.3	5.3	-0.1	62	24	92	133	0	7	340	4	0	

Habitat	From	To	Length	Geology			Code	Lithology
				%	fac %	sc %		
CEH00269	450	465	15	2.1	0.22	0.06	0.2	27 Monzonite
CEH00269	465	485	20	3.18	0.23	0.03	0.22	27 Monzonite
CEH00269	485	505	20	5.45	0.71	0.06	0.19	51 Endoskarn
CEH00269	505	520	15	7.86	0.96	0.15	0.91	51 Endoskarn
CEH00269	520	535	15	20.48	0.18	5.63	16.4	61 Sulfide Skarn
CEH00269	535	550	15	17.21	0.10	9.88	0.31	61 Sulfide Skarn
CEH00269	550	564	14	15.02	0.98	4.78	18.9	61 Sulfide Skarn
CEH00269	568	580	12	4.61	1.04	0.07	1.02	51 Endoskarn
CEH00269	580	598	18	2.08	0.09	0.04	0.98	27 Monzonite
CEH00269	601	612	11	4.59	0.16	0.03	0.14	65 Monzonite
CEH00269	612	711	6	2.14	0.26	0.03	0.25	27 Monzonite
CEH00269	711	747.5	1.5	4.84	0.09	0.02	0.08	27 Monzonite
CEH00269	747.5	784	19	10.36	0.06	0.03	0.05	17 Hornfels, PXN
CEH00269	784	790	6	2.36	0.2	0.04	0.19	17 Hornfels, PXN
CEH00269	790	813	5	3.53	0.13	0.04	0.12	27 Monzonite
CEH00269	813	827	14	4.59	0.17	0.04	0.16	27 Monzonite
CEH00269	827	832	5	5.1	0.51	0.06	0.49	27 Monzonite
CEH00269	832	878	9	5.18	0.23	0.05	1.21	17 Hornfels, PXN
CEH00269	878	884	6	4.69	0.04	0.02	0.03	27 Monzonite
CEH00269	884	895	11	8.09	0	0.1	0.03	2.3
CEH00270	42	60	80	3.09	0	0.01	0.02	0
CEH00270	60	80	20	0.63	0	0.01	0.02	0
CEH00270	80	89	19	1.35	5	0.01	0.02	0
CEH00270	89	120	21	3.11	0	0.47	0.44	47 Monzonite
CEH00270	120	140	20	2.18	0	0.15	0.04	14 Monzonite
CEH00270	140	180	20	2.87	0	0.49	0.07	49 Monzonite
CEH00270	160	180	20	0.74	0	0.01	0.02	0
CEH00270	180	200	20	0.94	0	0.01	0.02	0
CEH00270	200	220	20	1.05	5	0.01	0.02	0
CEH00270	220	241	21	1.34	5	0.02	0.02	0.02
CEH00270	241	260	19	2.18	0	0.05	0.03	0.04
CEH00270	260	285	21	4.63	0	0.54	0.06	52 Monzonite
CEH00270	285	305	19	8.93	0	1.07	0.06	5.12
CEH00270	305	325	20	11.78	0	1.41	0.07	38 Monzonite
CEH00270	325	345	20	9.36	0	1.25	0.09	11.92
CEH00270	345	365	20	18.98	0	4.29	0.12	4.25 Sulf
CEH00270	365	385	20	20.35	0	5.71	1.2	5.31 Sulf
CEH00270	385	405	20	13.35	0	0.8	0.07	3.77 Sulf
CEH00270	405	425	20	9.6	0	0.01	0.08	0
CEH00270	425	445	20	19.42	0	1.41	0.33	11.92 Sulf
CEH00270	445	465	20	28.95	0	17.7	6.28	15.6 Sulf
CEH00270-	465	485	20	13.71	0	4.49	0.18	4.29 Sulf
CEH00270	485	600	15	28.11	0	15.1	6.57	13.2 Sulf
CEH00270	600	515	15	21.22	0	11.6	2.31	10.8 Sulf
CEH00270	515	531	18	25.16	0	14	5.42	12.2 Sulf
CEH00270	531	540	9	5.4	0	0.08	0.08	0.08 Sulf
CEH00270	540	560	20	1.27	0	1	0.04	0.02 Sulf
CEH00270	560	580	20	1.34	0	0.02	0.02	0.01 Sulf
CEH00270	580	598	18	2.41	0	0.08	0.02	0.07 Sulf
CEH00270	598	620	22	2.44	0	0.08	0.05	0.08 Sulf
CEH00270	620	640	20	2.58	0	0.08	0.03	0.07 Sulf
CEH00270	640	660	20	3.36	0	0.06	0.03	0.05 Sulf
CEH00270	660	680	20	42.35	0	0.51	0.24	0.43 Sulf
CEH00270	680	700	20	48.72	0	0.64	0.16	0.59 Sulf
CEH00270	700	715	15	48.95	0	0.96	0.09	0.93 Sulf
CEH00270	715	729	14	44.32	0	1.16	0.21	0.87 Sulf
CEH00270	729	750	21	11.43	0	1.4	0.09	1.37 Sulf
CEH00270	750	760	10	5.08	0	0.61	0.03	0.61 Sulf
CEH00270	760	780	15	6.85	0	0.13	0.08	0.11 Sulf
CEH00270	780	847	18	6.47	0	1.42	0.04	1.41 Sulf
CEH00270	847	865	15	2.01	0	0.04	0.03	0.04 Sulf
CEH00270	865	880	15	2.08	0	0.19	0.03	0.18 Sulf
CEH00270	880	1030	20	1.73	0	0.09	0.02	0.08 Sulf
CEH00270	1030	1030	20	1.73	0	0.09	0.02	0.08 Sulf
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CEH0270	1030	1045	15	2.12	0.05	0.02	0.07	0.08	27	Monzonite	0.6	1.3	-0.9	0.1	28	23	37	0	3	374	7	0	4			
CEH0270	1045	1080	15	1.85	0.03	0.02	0.02	0.03	27	Monzonite	0.6	0.5	-0.1	0.1	16	15	20	2	2	262	4	0	4			
CEH0276	55	75	20	17.34	5	0.09	0	0.19	9	Gouge	2.8	3.2	0.4	1.1	1744	73	79	16	2	2714	6	0	7			
CEH0276	485	505	20	24.6	0	5.21	0.12	5.17	3.36	62 Magnetite Sulf	160.9	22.7	-138.3	2.1	430	1488	148.3	0	0	1488	79	16	0			
CEH0276	505	525	20	33.59	5	1.14	0.18	5.08	1.83	62 Magnetite Sulf	157.8	30.5	-127.3	2	4767	47	1655	73	27	1655	9	0	8			
CEH0276	525	545	20	13.08	0	1.89	0.05	1.87	0.56	62 Magnetite Sulf	52.0	9.3	-42.7	4.3	4313	17	268	136	16	22	1208	5	0	18		
CEH0276	545	565	20	4.91	0	0.53	0.08	0.51	0.71	51 Endokskam	15.6	11.8	-3.8	0.5	316	21	93	44	0	21	9	1230	4	0	0	
CEH0276	565	585	20	3.98	0	0.25	0.01	0.25	0.38	51 Endokskam	7.7	6.3	-1.3	0.6	201	60	173	2	3	513	5	0	0			
CEH0276	585	605	20	3.16	0	0.18	0	0.18	0.68	27 Monzonite	5.6	11.3	5.7	1.8	62	48	96	98	1	3	598	7	0	0		
CEH0276	605	625	20	2.95	0	0.65	0.08	0.63	5.07	27 Monzonite	19.4	84.5	86.1	1	118	77	116	83	9	6	865	7	0	0		
CEH0277	6	18	12	4.41	0	0.18	0.06	0.16	0.54	24 Diopite	4.7	9.0	4.3	0.1	34	28	73	57	0	32	3	0	0	8		
CEH0277	18	28	11	2	0.05	0.03	0.04	0.24	27 Monzonite	1.1	2.2	4.0	2.9	0.7	47	97	2007	201	5	487	3	0	0	18		
CEH0277	28	45	16	6.12	2	0.02	0.02	0.01	2.11	51 Endokskam	0.3	35.2	34.9	0.6	184	28	119	93	44	21	9	1230	4	0	0	
CEH0277	45	54.5	9.5	5.83	0	0.2	0.02	0.03	0.24	24 Diopite	0.2	4.0	3.8	0.1	62	94	30	956	4	0	0	12	0	0	0	18
CEH0277	54.5	75	20.5	0.86	0	0.01	0.02	0	0.1	27 Monzonite	0.0	1.7	1.7	0.1	8	13	30	0	5	213	1	0	0	6		
CEH0277	75	107	12	2.29	0	0.38	0.07	0.38	0.83	27 Monzonite	10.8	13.8	3.1	1.1	81	35	67	210	0	10	382	4	0	0	5	
CEH0277	107	117	10	5.55	0	0.53	0.08	0.5	1.76	17 Homfels, PXN	15.2	28.3	14.2	0.5	78	49	149	175	0	18	680	3	0	0	12	
CEH0277	117	135	18	1.54	0	0.08	0.04	0.08	0.24	27 Monzonite	2.2	4.0	1.8	0.1	29	18	41	216	0	18	255	2	0	0	5	
CEH0277	135	184	19	1.7	0	0.04	0.03	0.03	0.83	27 Monzonite	0.8	13.8	13.1	0.1	18	21	34	57	0	6	319	6	0	0	8	
CEH0277	184	175	21	1.98	0	0.03	0.03	0.03	0.44	27 Monzonite	0.5	7.3	6.9	0.1	10	12	34	28	0	8	340	4	0	0	3	
CEH0277	175	195	20	2.03	0	0.06	0.03	0.07	0.78	27 Monzonite	2.0	13.0	11.0	0.1	18	7	34	29	0	0	11	0	0	0	2	
CEH0277	195	218	23	1.82	0	0.12	0.03	0.11	0.98	27 Monzonite	3.3	13.1	0.1	18	6	41	37	7	7	340	11	0	0	6		
CEH0277	215	235	20	1.6	0	0.03	0.02	0.02	0.93	27 Monzonite	0.6	16.5	14.9	0.1	7	10	27	17	0	0	276	14	0	0	4	
CEH0277	235	255	20	1.33	0	0.02	0.02	0.01	0.1	27 Monzonite	0.3	1.7	1.4	0.1	8	12	22	28	0	7	191	6	0	0	2	
CEH0277	255	275	20	1.5	0	0.05	0.02	0.04	0.28	27 Monzonite	1.3	4.8	3.8	0.1	14	21	20	24	0	10	213	8	0	0	4	
CEH0277	275	295	20	1.67	0	0.03	0.02	0.02	0.15	27 Monzonite	0.6	2.5	1.9	0.1	9	18	29	18	0	12	213	8	0	0	2	
CEH0277	295	315	20	2.21	0	0.04	0.03	0.03	0.29	27 Monzonite	0.8	4.8	4.1	0.1	21	8	40	24	0	13	340	4	0	0	5	
CEH0277	315	334	19	2	0	0.1	0.04	0.09	0.34	27 Monzonite	2.5	5.7	3.2	0.1	34	12	30	84	0	12	234	4	0	0	6	
CEH0277	334	354	20	7.19	0	0.01	0.06	0.09	0.8	27 Monzonite	30.6	13.3	-17.3	1	480	31	127	25	31	11	2100	3	0	0	8	
CEH0277	354	376	22	5.62	0	0.47	0.06	0.46	1.25	Exokskam	13.8	20.8	-20.8	0.5	268	28	126	17	23	1800	5	0	0	0		
CEH0277	376	395	19	10.42	0	0.08	0.09	0.05	1.56	51 Endokskam	32.3	28.0	-8.3	0.5	786	0	172	0	21	3270	2	0	0	0		
CEH0277	395	415	20	2.03	0	0.04	0.03	0.02	0.02	51 Endokskam	246.7	-169.7	40	4257	419	70	33	41	41	3890	4	0	0	0		
CEH0277	415	435	20	3.57	0	0.04	0.03	0.03	0.29	27 Monzonite	18.6	16.3	-12.3	6.5	188	312	608	88	9	11	480	9	0	0	7	
CEH0277	435	455	20	4.03	0	0.1	0.04	0.09	0.34	27 Monzonite	30.8	17.0	-13.8	8	386	93	176	59	0	9	405	8	0	0	6	
CEH0277	455	475	20	2.61	0	0.49	0.06	0.47	1.91	27 Monzonite	14.4	31.8	17.5	6.2	134	208	523	1064	0	11	425	8	0	0	6	
CEH0277	475	495	20	2.77	0	0.75	0.11	0.71	1.86	27 Monzonite	21.7	31.0	9.3	1.8	195	67	210	1461	0	12	425	5	0	0	6	
CEH0277	495	515	20	1.84	0	0.17	0.04	0.16	0.74	27 Monzonite	4.7	12.3	7.6	0.1	32	10	38	84	14	11	525	7	0	0	6	
CEH0277	515	535	20	1.97	0	0.05	0.09	0.61	0.98	27 Monzonite	1.1	3.3	2.2	0.1	18	38	84	13	11	384	3	0	0	6		
CEH0277	535	555	20	2.03	0	0.03	0.03	0.03	0.39	27 Monzonite	0.5	6.5	6.0	0.1	15	7	42	21	0	11	278	5	0	0	5	
CEH0277	555	573	18	2.22	0	0.14	0.03	0.13	0.59	27 Monzonite	3.9	9.8	6.9	0.8	27	12	43	65	0	9	340	8	0	0	4	
CEH0277	573	592	19	1.89	0	0.11	0.03	0.01	0.69	27 Monzonite	3.0	11.5	8.5	0.1	19	10	54	79	0	9	234	6	0	0	6	
CEH0277	592	640	15	2.7	0	0.08	0.03	0.07	0.54	27 Monzonite	20.0	9.0	7.0	0.1	29	7	54	59	0	13	381	8	0	0	15	
CEH0277	640	655	15	2.01	0	0.08	0.03	0.07	0.44	27 Monzonite	2.0	7.3	5.3	0.1	19	14	56	59	0	13	381	8	0	0	15	
CEH0277	655	680	10	11.54	0	0.37	0.13	0.38	0.73	27 Monzonite	114.2	62.2	-52.0	0.7	846	40	111	278	0	16	309	5	0	0	14	
CEH0277	680	700	10	2.17	0	0.12	0.03	0.11	0.28	27 Monzonite	3.3	4.8	1.8	0.1	23	8	56	117	0	14	340	8	0	0	4	
CEH0277	700	720	10	7.48	0	0.31	0.07	0.29	0.45	52 Exokskam	8.6	40.8	32.2	0.1	148	31	87	115	0	13	381	3	0	0	13	
CEH0277	720	75	15	2.75	0	0.18	0.03	0.07	0.54	27 Monzonite	19.7	12.3	-7.4	0.1	237	15	34	29	0	16	255	6	0	0	15	
CEH0277	75	80	5	5.81	0	0.02	0.02	0.01	0.2	27 Monzonite	44.1	3.3	-40.7	0.1	425	284	28	23	0	11	234	2	0	0	15	
CEH0277	80	844	7	2.87	0	0.3	0.03	0.29	0.31	27 Monzonite	0.3	4.0	3.7	0.1	132	34	25	29	0	10	324	3	0	0	14	
CEH0277	844	87	13	5.87	0	0.46	0.05	0.44	0.93	27 Monzonite	89	165.2	146.3	1.5	239	28	109	5	0	12	552	3	0	0	14	
CEH0277	87	97	10	2.8	5	0.02	0.02	0.01	0.21	52 Exokskam	6.3	21.2	14.9	0.1	117	22	68	65	0	13	2761	0	0	0	1	
CEH0277	97	107	10	0.68	0	0.01	0.02	0	0.28	27 Monzonite	11.3	20.8	9.8	0.1	35	22	35	0	1	457	0	0	0	1		
CEH0277	107	118	123	0.78	0	0.01	0.02	0	0.24	27 Monzonite	0.0	4.0	4.8	0.1	6	153	1	0	1	1	254	0	0	0	1	
CEH0277	118	180	15	2																						

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CEH0280	175	13	188	6.18	0.236	2.3	1.16	51	Endoskam	72.5	19.2	-85.3	0.1	159	22	48	155	16	491	4	0	6	0	
CEH0280	188	6	194	6.07	0.42	0.04	0.41	86	Monzonite	12.5	18.0	3.5	0.1	42	25	45	72	0	10	373	3	0	10	
CEH0280	194	21	215	1.7	0.08	0.03	0.07	19	Monzonite	2.0	3.2	1.1	0.1	18	12	28	21	0	4	187	3	0	1	
CEH0280	249	15	284	2.6	0.28	0.04	0.25	27	Monzonite	7.5	44.8	37.3	0.8	73	22	43	45	0	7	474	4	0	5	
CEH0280	325	20	345	2.04	0.24	0.04	0.28	65	Monzonite	6.9	8.8	2.0	0.8	63	12	43	42	0	5	305	4	0	5	
CEH0280	385	400	400	0.61	0.11	0.04	0.1	14	27 Monzonite	2.8	2.3	-0.5	0.1	36	16	28	48	0	6	102	3	0	1	
CEH0280	400	10	410	0.75	0.04	0.14	0.1	27	Monzonite	4.1	1.7	-2.4	0.5	33	21	28	53	0	6	288	2	0	0	
CEH0280	440	5	445	0.96	0.13	0.03	0.12	0.1	27 Monzonite	3.6	1.7	-1.9	1.8	43	52	67	26	0	5	34	3	0	1	
CEH0280	515	20	535	1.31	0.39	0.05	0.37	81	Pyrrhotite Sulf	11.4	16.2	3.8	2.6	35	107	271	551	0	5	102	4	0	1	
CEH0280	535	27	555	2.15	0.14	0.04	0.13	87	27 Monzonite	3.8	11.2	7.4	0.1	44	16	59	75	0	6	119	5	0	3	
CEH0280	555	10	565	10.7	0.18	0.06	0.16	87	51 Endoskam	35.9	31.2	-4.8	0.1	1008	10	59	48	0	6	288	4	0	3	
CEH0280	565	20	585	1.75	0.7	0.07	0.88	24	27 Monzonite	20.8	40.0	2.6	0.1	36	16	28	48	0	6	102	3	0	0	
CEH0280	585	18	605	2.85	0.46	0.04	0.46	317	27 Monzonite	13.8	52.8	39.1	6.5	123	128	253	325	0	6	288	2	0	0	
CEH0280	603	5	608	25.9	0.18	0.05	0.22	18.4	4.13	61 Pyrrhotite Sulf	512.2	68.8	-443.3	3.5	6382	53	201	1814	0	5	593	4	0	9
CEH0280	603	20	623	2.14	0.05	0.03	0.04	24	27 Monzonite	1.1	4.0	2.9	2.6	35	107	271	551	0	5	100	8	0	13	
CEH0280	682	15	707	2.89	0.18	0.02	0.17	2.4	27 Monzonite	5.3	40.0	34.7	0.6	32	34	127	50	0	6	288	4	0	0	
CEH0280	722	732	732	1.0	2.82	0.04	0.03	0.48	27 Monzonite	8.0	7.2	0.1	14	51	41	0	12	390	10	5	0	5	0	4
CEH0280	780	795	795	1.35	0.78	0.05	0.76	1.68	27 Monzonite	23.6	28.0	4.4	6.4	102	84	220	1306	0	8	390	5	0	0	
CEH0280	795	20	845	6.84	0.97	0.05	0.85	3.41	17 Homfels, GT	29.5	56.8	27.3	0.1	320	19	90	191	0	12	424	6	0	0	
CEH0280	845	20	865	12.48	0.55	0.14	5.5	3.02	51 Endoskam	171.3	50.3	-120.9	9.4	1727	149	876	1302	0	6	898	5	0	8	
CEH0280	865	20	875	5.87	0.5	0.05	0.48	0.77	27 Monzonite	14.8	12.8	2.0	0.1	320	121	108	89	0	24	1162	37	0	0	
CEH0280	875	10	885	2.41	0.27	0.04	0.26	1.49	17 Homfels, GT	7.8	24.8	17.0	0.1	191	33	73	23	0	3	762	16	0	0	
CEH0280	885	10	895	8.32	0.42	0.05	0.4	1.87	27 Monzonite	12.3	31.2	18.8	0.5	214	28	104	162	0	6	474	3	0	1	
CEH0280	895	15	910	4.98	0.35	0.03	0.34	2.11	27 Monzonite	10.5	35.2	24.7	6	223	78	239	745	0	13	864	12	0	0	
CEH0280	910	15	915	4.7	1.0	0.01	0.02	0	9 Gouge	60.0	65.0	24.7	6	102	30	28	130	2	6	840	3	0	0	
CEH0284	20	35	15	4.08	1.3	0.01	0.02	0	5.45	17 Homfels, GT	90.9	90.9	0.1	33	121	88	88	121	2	6	1087	17	0	0
CEH0284	35	50	50	1.5	2	0.01	0.01	0.01	0.85	17 Homfels, GT	0.2	14.2	14.0	0.1	18	24	42	41	3	6	272	3	0	0
CEH0284	60	70	70	1.91	0.18	0.03	0.15	0.5	27 Monzonite	0.3	5.0	4.7	0.5	84	48	164	157	1	14	620	3	0	0	
CEH0284	70	85	85	3.24	2	0.02	0.02	0.01	0.3	27 Monzonite	0.3	5.0	4.7	0.5	84	48	164	157	1	14	620	3	0	0
CEH0284	110	130	130	3.32	2	0.02	0.02	0.01	1	27 Monzonite	0.3	16.7	16.4	2.2	167	197	178	115	2	14	602	4	0	0
CEH0284	130	150	20	2.31	0.2	0.06	0.02	0.05	1.95	27 Monzonite	1.6	17.5	16.8	0.9	27	24	58	98	3	8	583	4	0	0
CEH0284	150	170	20	3.3	2	0.02	0.02	0.01	1.05	27 Monzonite	0.3	17.5	17.2	0.8	91	29	108	188	1	5	1989	4	0	0
CEH0284	170	190	20	1.24	0.02	0.02	0.01	0.01	0.3	27 Monzonite	0.3	5.0	4.7	0.5	31	34	37	59	0	2	291	1	0	0
CEH0284	248	268	268	1.91	0.18	0.03	0.15	0.5	27 Monzonite	4.5	8.3	3.8	3.2	151	23	55	77	0	6	349	6	0	0	
CEH0284	283	288	15	1.4	0.05	0.03	0.04	0.1	27 Monzonite	1.1	1.7	0.6	0.5	65	21	46	131	1	14	620	3	0	0	
CEH0284	288	308	10	1.92	0	0.3	0.06	0.28	0.5	27 Monzonite	8.6	8.3	-0.3	0.6	176	23	36	210	2	14	602	4	0	0
CEH0284	308	328	21	4.74	1.62	0.06	1.6	2.55	51 Endoskam	49.7	42.5	-7.2	2	2312	36	148	209	9	7	780	2	0	0	
CEH0284	328	350	21	7.97	0.22	0.03	0.03	1.05	51 Endoskam	6.4	101.0	94.8	0	172	15	22	175	25	5	2978	0	0	0	
CEH0284	350	380	10	4.68	0.18	0.04	0.17	7.55	51 Endoskam	5.0	128.9	120.9	0.5	46	22	92	173	25	5	1280	2	0	0	
CEH0284	380	375	15	4.18	0.39	0.03	0.38	1.7	52 Endoskam	11.7	28.3	16.6	0.1	126	38	81	88	1	10	427	3	0	0	
CEH0284	375	395	20	2.11	0.35	0.03	0.34	0.4	51 Endoskam	10.5	26.3	16.7	-3.8	32	71	172	549	0	6	175	3	0	0	
CEH0284	395	415	20	2.24	0.02	0.03	0.01	0.1	27 Monzonite	0.2	1.7	1.6	0.1	70	37	69	32	0	7	175	4	0	0	
CEH0284	415	425	20	2.23	0.09	0.03	0.08	0.05	27 Monzonite	2.3	0.8	-1.5	0.1	72	19	43	24	1	6	194	4	0	0	
CEH0284	435	450	15	2.74	0	0.4	0.05	0.38	1.75	51 Endoskam	11.7	28.2	17.5	0.1	217	29	49	279	3	3	281	3	0	0
CEH0284	450	471	21	32.26	0	6.71	2.19	5.98	0.48	61 Pyrrhotite Sulf	176.5	8.0	-167.5	1	5072	48	245	82	9	50	2515	6	0	0
CEH0284	471	480	19	23.63	0	1.1	4.58	9.57	0.26	62 Magnetite Sulf	276.3	4.3	-271.0	1	5782	37	162	66	3	46	1951	5	0	0
CEH0284	480	505	15	7.67	0	2.94	0.24	2.52	0.24	62 Magnetite Sulf	72.2	40.3	-1.5	1.5	276	12	157	56	3	17	1720	1	0	0
CEH0284	505	516	11	4.78	0	0.09	0.03	0.08	1.95	52 Exoskam	2.3	32.5	30.2	0.1	703	53	133	255	3	8	802	2	0	0
CEH0284	516	524	8	3.57	0	0.58	0.08	0.45	0.45	52 Exoskam	17.2	7.5	-8.7	0.6	203	36	96	521	1	6	368	6	0	0
CEH0284	524	539	15	4.5	0	0.7	0.08	0.68	0.05	64 Vonsentie-nat	203.3	19.2	-184.1	0.1	3745	15	207	79	1	30	1883	8	0	0
CEH0284	539	640	20	37.51	0	1.15	0.3	1.14	0.17	64 Vonsentie-nat	390.6	3.7	-387.0	1	6052	4	273	37	3	44	2515	4	0	0
CEH0284	640	686	26	19.24	0	9.27	0.15	9.22	0.17	61 Pyrrhotite Sulf	354.1	2.8	-361.2	1	5776	422	88	23	17	10	407	4	0	0
CEH0284	686	700	20	20.11	0	3.42	0.24	3.34	0.45	61 Pyrrhotite Sulf	287.3	4.3	-284.5	0.5	3474	39	382	51	33	170	3165	7	0	0
CEH0284	700	720	20	16.78	0	10.6	0.12	10.6	0.22	61 Pyrrhotite Sulf	330.3	3.7	-326.8	0	3546	44	695	58	10	37	3387	2	0	0
CEH0284	720	735	15	47.63	0	2.03	0.09	2	0.35	61 Pyrrhotite Sulf	287.2	74.2	-213.0	1.5	5426	40	305	50						

HoldId	From	To	Length	fe%	fec%	sc%	sc4%	sc3%	Code	Lithology	NP	Np-AP	AG	Co	MN	Mo	Tg	W	0	9	
CEH0284	800	815	.15	1.88	0	0.12	0.03	0.11	27	Monzonite	3.3	10.8	7.6	0.1	65	156	3	7	680	2	
CEH0284	870	880	.10	2.94	0	0.15	0.02	0.14	27	Monzonite	4.4	66.7	62.3	0.5	31	31	49	0	337	1	
CEH0286	45	60	.15	1.53	2	0.01	0.01	0.01	27	Monzonite	0.2	2.5	2.3	0.1	10	12	33	0	4	0	
CEH0286	60	75	.15	1.72	2	0.01	0.02	0	27	Monzonite	0.0	1.7	1.7	0.1	11	7	37	13	0	3	
CEH0286	100	110	.10	3.41	0	0.54	0.08	0.52	0.1	51 Endoskam	15.9	1.7	-14.3	0.1	11	7	37	13	0	3	
CEH0286	110	130	.20	6.48	2	0.87	0.08	0.84	1.2	24 Diorite	25.9	20.0	-6.9	0.1	59	9	30	87	0	6	
CEH0286	130	150	.20	3.87	17	0.32	0.05	0.3	2.75	17 Homfels, BT	2.7	17	Homfels, BT	0.1	312	21	61	51	0	6	
CEH0286	150	170	.20	4.27	2	0.44	0.04	0.43	2.4	17 Homfels, BT	9.2	45.8	36.6	0.1	48	16	59	71	0	9	
CEH0286	170	185	.15	3.8	0	0.26	0.03	0.25	1.85	17 Homfels, BT	13.1	40.0	26.9	0.1	57	38	70	67	0	10	
CEH0286	190	210	.20	4.68	0	0.34	0.03	0.33	2.15	17 Homfels, BT	7.7	30.8	23.2	0.1	45	18	58	52	0	11	
CEH0286	210	230	.20	3.72	0	0.21	0.02	0.2	2.35	17 Homfels, BT	10.2	35.8	25.7	0.1	95	18	61	89	0	8	
CEH0286	230	250	.20	4.4	0	0.12	0.03	0.11	1.45	17 Homfels, BT	6.3	32.9	24.9	0.1	36	13	61	135	0	8	
CEH0286	250	270	.20	4.28	0	0.31	0.03	0.3	0.4	17 Homfels, BT	2.7	20.9	20.9	0.1	312	21	61	51	0	6	
CEH0286	270	280	.10	3.67	0	0.3	0.02	0.29	0.8	51 Endoskam	8.1	13.3	4.3	0.1	29	9	58	124	0	9	
CEH0286	280	300	.20	4.67	0	0.32	0.03	0.31	1.45	51 Endoskam	9.5	24.2	14.6	0.1	70	12	41	46	0	8	
CEH0286	300	315	.15	4.21	0	0.4	0.03	0.39	0.65	17 Homfels, BT	12.0	10.8	-1.2	0.1	48	23	85	70	0	5	
CEH0286	315	350	.10	4.29	0	0.56	0.04	0.55	2.15	17 Homfels, BT	16.9	35.8	19.0	0.1	92	22	43	65	0	7	
CEH0286	350	380	.10	3.14	0	0.14	0.03	0.13	0.2	51 Endoskam	3.9	3.3	3.3	0.1	22	22	22	43	0	6	
CEH0286	380	390	.10	4.15	0	0.27	0.03	0.26	1.15	17 Homfels, BT	9.2	6.7	-2.8	0.1	22	27	57	30	0	7	
CEH0286	400	410	.10	2.97	0	0.14	0.03	0.13	0.25	17 Homfels, BT	8.0	19.2	11.2	0.1	62	23	31	76	0	9	
CEH0286	490	510	.20	4.2	0	0.58	0.06	0.56	2	17 Homfels, BT	3.9	4.2	0.3	0.1	22	25	60	36	0	8	
CEH0286	510	529	.19	3.55	0	0.61	0.03	0.6	1.8	17 Homfels, BT	17.3	33.3	16.0	0.5	85	30	68	50	0	6	
CEH0286	529	540	.11	1.5	0	0.04	0.03	0.03	1.05	27 Monzonite	18.6	30.0	11.4	0.7	60	59	100	95	0	8	
CEH0286	540	608	.11	1.81	0	0.04	0.03	0.03	0.65	27 Monzonite	0.8	17.5	16.7	0.1	18	17	36	21	0	3	
CEH0286	608	625	.9	1.78	0	0.07	0.03	0.06	3.65	27 Monzonite	0.8	10.8	10.1	0.1	12	14	42	21	0	1	
CEH0286	625	65	.15	1.51	1	0.08	0.01	0.07	0.24	27 Monzonite	1.7	60.8	69.1	0.1	13	25	66	71	0	4	
CEH0286	65	85	.20	2.08	1	0.04	0.03	0.03	0.15	27 Monzonite	2.0	4.0	2.0	0.1	66	5	33	33	0	7	
CEH0286	85	135	.20	1.84	1	0.17	0.03	0.16	1.41	27 Monzonite	0.8	2.5	1.7	0.1	48	5	31	23	0	4	
CEH0286	135	155	.20	5.12	0	1.13	0.11	0.09	2.13	17 Homfels, BT	33.6	35.5	18.7	0.1	30	21	20	42	0	3	
CEH0286	155	175	.20	4.04	0	0.17	0.08	0.07	1.12	17 Homfels, BT	20.5	15.7	-1.8	0.1	43	10	58	163	0	4	
CEH0286	175	220	.20	2.08	0	0.16	0.04	0.15	0.53	27 Monzonite	0.8	10.8	10.1	0.1	12	14	42	21	0	11	
CEH0286	220	385	.20	2.08	0	0.16	0.04	0.15	0.53	27 Monzonite	4.4	60.8	69.1	0.1	13	25	71	32	0	3	
CEH0286	385	555	.20	2.91	0	0.2	0.04	0.19	3.88	27 Monzonite	2.0	4.0	2.0	0.1	66	5	33	33	0	4	
CEH0286	555	571	.16	5.18	0	0.25	0.06	0.23	2.33	17 Homfels, P/XN	5.6	64.7	58.1	0.5	66	94	147	160	0	4	
CEH0286	571	585	.14	3.4	0	0.47	0.07	0.45	0.68	27 Monzonite	6.9	38.8	32.0	0.5	66	94	147	160	0	4	
CEH0286	585	616	.14	3.28	0	0.39	0.06	0.37	1.07	27 Monzonite	13.6	11.3	-2.3	0.1	30	17	58	39	0	3	
CEH0286	616	625	.17	2.8	0	0.48	0.08	0.44	2.72	17 Monzonite	11.3	17.8	6.6	0.1	156	10	70	145	0	11	
CEH0286	625	385	.20	3.32	0	0.38	0.05	0.36	3.83	27 Monzonite	13.4	45.3	31.9	1.1	197	57	238	49	0	10	
CEH0286	385	555	.16	1.66	1	0.01	0.01	0.01	0.1	27 Monzonite	5.6	64.7	58.1	0.5	66	94	147	160	0	4	
CEH0286	555	571	.16	1.75	1	0.03	0.02	0.02	0.65	27 Monzonite	0.2	1.7	1.7	0.1	66	94	147	160	0	4	
CEH0286	571	610	.20	1.89	0	0.16	0.05	0.14	0.7	27 Monzonite	0.8	10.8	10.2	0.1	66	94	147	160	0	4	
CEH0286	610	225	.10	1.94	0	0.2	0.02	0.19	1.3	27 Monzonite	4.2	11.7	7.6	0.1	21	12	31	20	0	4	
CEH0286	225	280	.10	2.16	0	0.23	0.02	0.24	1.4	27 Monzonite	5.9	21.7	15.7	0.7	19	17	56	39	0	4	
CEH0286	280	307	.12	4.17	0	1.95	0.04	1.94	1.65	27 Monzonite	6.9	23.3	18.5	0.1	122	13	30	40	0	2	
CEH0286	307	330	.13	2.08	0	1.13	0.07	1.11	0.55	27 Monzonite	11.1	63.8	62.8	1.1	148	10	31	22	0	4	
CEH0286	330	379	.10	2.16	0	0.08	0.09	0.05	0.07	0.8	27 Monzonite	0.2	1.7	1.7	0.1	66	94	147	160	0	4
CEH0286	379	394	.15	8.06	0	0.17	0.02	0.16	0.9	17 Homfels, P/XN	2.0	13.3	11.3	0.1	30	14	40	43	1	4	
CEH0286	394	409	.15	7.25	0	0.25	0.02	0.24	0.45	17 Homfels, P/XN	5.0	16.0	10.0	0.1	24	24	41	205	12	6	
CEH0286	409	424	.15	9.8	0	0.23	0.02	0.24	1.4	27 Monzonite	7.5	0	0	0.6	403	20	45	277	24	6	
CEH0286	424	444	.20	17	0	0.85	0.11	0.48	3.27	52 Eksokam	0.6	18.3	17.7	0.1	71	27	45	218	22	6	
CEH0286	444	462	.18	28.47	0	16.7	3.33	15.6	0.33	61 Pyrophyte Sulf	134.2	64.5	-34.5	0.2	3513	34	276	44	21	29	4
CEH0286	462	482	.10	16.54	0	8.32	1.25	7.9	4.95	52 Eksokam	34.2	9.2	-25.1	0.7	323	27	42	118	15	16	0
CEH0286	482	505	.33	5.49	0	0.31	0.1	0.28	4.15	61 Endoskam	2.0	13.3	11.3	0.1	30	14	40	43	1	4	
CEH0286	505	520	.15	5.29	0	0.27	0.03	0.26	1.14	52 Eksokam	8.1	68.2	67.1	0.9	1361	9	96	218	6	393	4
CEH0286	520	540	.20	6.6	0	1.07	0.08	1.05	7.8	52 Eksokam	32.6	130.0	97.5	0.1	874	273	45	218	22	1330	6
CEH0286	540	565	.15	13.16	0	2.71	0.09	2.68	3.85	52 Eksokam	63.3	64.2	-18.1	2.3	3042	204	333	402	9	1	0
CEH0286	565	585	.10	9.29	0	0.46	0.03	0.45	0.9	52 Eksokam	13.9	15.0	1.1	0.1	2070	88	228	157	12	748	0
CEH0286	585	605	.33	3.9	0	0.52	0.03	0.51	0.09	51 Endoskam	15.8	34.8	19.1	0.5	367	18	178	136	13	2428	5
CEH0286	605	610	.15	6.91	0	0.26	0.03	0.24	1.17	51 Endoskam	8.1	61.9	59.0	0.1	1306	39	130	92	22	1170	4
CEH0286	610	630	.20	1.37	0	0.04	0.02	0.03	0.35	27 Monzonite	34.8	30.0	-4.8	4.5	673	254	283	202	9	1330	6
CEH0286	630	640	.10	4.37	0	0.98	0.03	0.95	0.55	17 Homfels, BT	28.5	9.2	-20.4	0.1	82	18	36	203	11	318	6
CEH0286	640	655	.15	2.29	0	0.07	0.02	0.06	0.26	27 Monzonite	1.9	4.2	2.3	0.1	232	3	52	277	0	15</td	

HoleID	From	To	Length	fec%	fec\$%	fec%	fec#%	fec%	fec#%	Code	Lithology	AP	NP	Np-AP	AG	CU	PB	ZN	AS	EI	Co	MN	Mo	Ts	W	
CEH0324	683	695	12	11.1	0	0.82	0.04	0.81	2.15	52	Exoskam	250	35.8	10.8	0.1	871	9	381	78	260	0	4	2300	1	0	
CEH0324	685	701.5	6.5	7.27	0	0.83	0.04	0.92	0.6	52	Exoskam	28.4	10.0	-18.4	0.1	706	18	319	11	447	0	8	505	1	10	
CEH0324	701.5	716	14.5	3.5	0	0.85	0.07	0.83	0.25	52	Exoskam	181.7	4.2	-177.6	1.2	5817	1	1	289	0	0	0	0	0	6	
CEH0324	716	734	18	3.47	0	0.44	0.03	0.43	0.7	52	Exoskam	13.3	11.7	-1.6	0.5	584	25	75	39	0	0	0	0	0	4	
CEH0324	734	753	19	3.42	0	0.32	0.03	0.31	0.3	52	Exoskam	9.5	5.0	-4.5	0.1	276	23	76	40	0	0	0	0	0	7	
CEH0324	753	761	8	11.26	0	0.29	0.05	0.27	0.2	52	Exoskam	70.8	3.3	-87.4	0.5	1933	5	581	1	0	0	0	0	0	0	0
CEH0324	761	783	22	3.47	0	0.29	0.03	0.28	0.25	52	Homfels, PXN	8.6	4.2	-4.4	0.1	244	26	98	40	0	0	0	0	0	0	0
CEH0324	783	798	15	10.64	0	0.34	0.06	0.32	1.45	52	Exoskam	97.2	24.2	-73.0	0.8	2487	8	485	29	0	0	0	0	0	0	0
CEH0324	798	817	19	3.32	0	0.37	0.03	0.36	17.8	52	Exoskam	11.1	286.7	286.8	0.1	250	1	164	37	5	1	581	0	0	0	0
CEH0324	817	839	22	2.46	0	0.31	0.03	0.3	33.95	50	565.9	565.7	0.1	159	22	39	32	2	2	0	0	0	0	0	0	0
CEH0324	839	853	14	17.4	0	0.87	0.08	0.85	0.95	62	Magnete Sulf	151.3	16.8	-135.4	0.5	3038	28	439	75	29	19	318	1	0	0	
CEH0324	853	863	10	13.6	0	0.49	0.08	0.47	0.5	62	Magnete Sulf	170.6	3.0	-187.6	1	2271	21	285	61	9	22	2255	1	1	0	
CEH0324	863	881	18	24.58	0	11.1	0.09	11.1	0.23	64	Vonsentle-met	345.2	3.8	-341.3	1.5	3677	18	598	85	8	54	449	3	0	0	
CEH0324	881	897	16	29.36	0	2.5	0.08	2.47	0.28	64	Vonsentle-met	78.7	4.7	-72.1	0.5	1672	11	624	58	4	37	1739	7	0	0	
CEH0324	897	917	20	22.45	0	0.63	0.08	0.61	0.14	64	Vonsentle-met	143.8	2.3	-141.4	0.6	2411	14	285	83	4	45	4177	2	0	0	
CEH0324	917	929	12	26.8	0	0.317	0.07	0.315	0.3	62	Magnete Sulf	98.0	5.0	-88.0	0.6	2214	17	479	28	2	28	1616	2	0	0	
CEH0324	929	948	19	29.4	0	0.528	0.08	0.528	0.5	62	Magnete Sulf	183.9	8.3	-155.8	1.1	3419	11	421	27	0	0	0	0	0	0	
CEH0324	948	963	15	15.7	0	0.284	0.07	0.282	0.9	51	Endoskam	87.7	15.0	-127.7	1.5	1672	1	1680	4	0	0	0	0	0	0	0
CEH0324	963	985	22	3.37	0	0.18	0.03	0.17	0.95	52	Monzonite	5.2	15.8	-10.7	0.5	285	15	172	48	0	0	0	0	0	0	0
CEH0324	985	1000	15	31.72	0	1.58	0.12	1.54	0.28	62	Magnete Sulf	47.5	4.7	-42.8	4	3633	24	1323	56	3	53	617	3	0	0	
CEH0324	1000	1020	20	2.74	0	0.15	0.02	0.14	0.65	27	Monzonite	4.4	10.8	6.5	0.1	151	15	33	21	0	0	0	0	0	0	0
CEH0324	1020	1040	20	3.04	0	0.08	0.02	0.07	0.95	27	Monzonite	2.2	15.8	13.6	0.1	63	13	54	25	0	0	0	0	0	0	0
CEH0324	1040	105	15	3.32	0	0.04	0.02	0.03	0.17	17	Homfels, PXN	0.9	143.4	142.4	1.5	292	81	128	42	0	0	0	0	0	0	0
CEH0324	105	12	3.24	0	0.28	0.03	0.27	0.6	17	Homfels, PXN	8.3	78.7	68.4	0.1	28	44	30	47	0	0	0	0	0	0	0	
CEH0324	12	80	90	3.47	0	0.22	0.03	0.21	0.75	17	Homfels, PXN	6.4	12.5	6.1	0.1	63	18	32	48	0	0	0	0	0	0	0
CEH0324	80	154	5	4.35	0	0.33	0.03	0.32	0.23	27	Monzonite	9.8	38.3	28.5	0.1	91	19	40	32	0	0	0	0	0	0	0
CEH0324	154	163	4	3.58	0	0.39	0.06	0.37	0.25	17	Homfels, PXN	42.5	4.2	-38.3	6	225	38	89	118	0	0	0	0	0	0	0
CEH0324	163	173	10	1.56	0	0.1	0.02	0.09	0.2	27	Monzonite	2.8	3.3	11.1	0.1	28	5	33	26	0	0	0	0	0	0	0
CEH0324	173	435	20	1.76	0	0.11	0.02	0.1	0.3	27	Monzonite	3.1	5.0	1.9	3.5	30	30	167	30	60	0	0	0	0	0	0
CEH0324	435	518	5	1.46	0	0.28	0.02	0.27	0.8	51	Endoskam	8.4	13.3	4.9	1.7	125	31	119	763	0	0	0	0	0	0	0
CEH0324	518	523	5	1.44	0	0.27	0.02	0.28	0.75	51	Endoskam	8.1	12.5	4.4	1.7	137	30	98	760	0	0	0	0	0	0	0
CEH0324	523	528	5	2.48	0	0.36	0.02	0.35	1.4	27	Monzonite	10.9	23.3	12.4	1.4	46	22	49	488	0	0	0	0	0	0	0
CEH0324	528	655	8	1.7	0	0.25	0.03	0.24	1.55	27	Monzonite	7.3	25.8	18.5	1.7	77	46	111	29	20	0	0	0	0	0	0
CEH0324	655	665	19	1.88	0	0.08	0.06	0.08	0.25	17	Homfels, PXN	2.2	13.3	11.1	0.1	34	24	111	42	0	0	0	0	0	0	0
CEH0324	665	675	20	1.98	0	0.08	0.02	0.07	0.8	27	Monzonite	0.9	40.0	39.1	0.1	23	16	83	18	0	0	0	0	0	0	0
CEH0324	675	590	10	4.36	0	0.32	0.02	0.31	0.7	27	Monzonite	9.7	11.7	2.0	0.1	179	16	47	51	0	0	0	0	0	0	0
CEH0324	590	712	15	3.1	0	0.08	0.02	0.05	0.22	27	Monzonite	1.6	36.7	35.1	0.1	27	15	373	44	0	0	0	0	0	0	0
CEH0324	712	775	15	6.38	0	0.32	0.03	0.31	1.3	17	Homfels, PXN	9.5	21.7	12.1	0.5	206	16	54	58	0	0	0	0	0	0	0
CEH0324	775	805	20	5.72	0	0.21	0.03	0.2	0.6	51	Endoskam	6.1	10.0	3.9	0.1	92	16	29	40	0	0	0	0	0	0	0
CEH0324	805	825	20	5.3	0	0.08	0.02	0.05	1.3	27	Monzonite	0.5	3.3	2.9	1.9	20	21	39	22	0	0	0	0	0	0	0
CEH0324	825	840	15	6.02	0	0.04	0.02	0.03	2.4	17	Homfels, PXN	0.9	40.0	39.1	0.1	23	16	83	18	0	0	0	0	0	0	0
CEH0324	840	10	4.9	0	0.04	0.03	0.4	4.4	52	Exoskam	13.3	73.3	60.1	1.6	284	125	403	48	0	0	0	0	0	0	0	
CEH0324	10	30	18	5.43	0	0.04	0.02	0.03	2.15	6	Alluvium	0.9	35.8	34.9	0.1	43	22	45	35	0	0	0	0	0	0	0
CEH0324	30	35	5	1.37	0	0.02	0.01	0.02	0.25	27	Monzonite	0.5	4.2	3.7	0.1	13	14	40	30	0	0	0	0	0	0	0
CEH0324	35	110	25	4.48	0	0.02	0.01	0.02	0.2	27	Monzonite	0.5	3.3	2.9	1.9	20	21	39	22	0	0	0	0	0	0	0
CEH0324	110	160	20	3.08	0	0.01	0.01	0.01	0.15	27	Monzonite	0.2	2.5	2.3	1.9	20	21	39	22	0	0	0	0	0	0	0
CEH0324	160	186	15	6.67	0	1.04	0.02	0.03	0.15	27	Monzonite	0.9	2.5	1.6	0.1	5	13	21	9	0	0	0	0	0	0	0
CEH0324	186	240	15	2.71	0	0.07	0.03	0.04	0.4	27	Monzonite	1.7	6.7	4.9	0.1	89	14	39	14	0	0	0	0	0	0	0
CEH0324	240	305	18	10.69	0	1.11	0.06	1.09	0.9	27	Monzonite	4.2	15.0	10.8	6.3	110	47	137	778	0	0	0	0	0	0	0
CEH0324	305	365	25	9.23	0	2.16	0.06	2.14	4.17	52	Exoskam	108.9	65.7	43.2	24	4067	150	122	33	0	0	0	0	0	0	0
CEH0324	365	405	20	6.4	0	0.17	0.03	0.16	1.85	52	Exoskam	6.3	19.7	13.4	2	516	89	329	54	0	0	0	0	0	0	0
CEH0324	405	425	20	8.24	0	0.23	0.06	0.21	1.18	51	Endoskam	4.8	30.8	26.0	0.5	229	17	61								

Holeid	From	To	Length	fec%	sec%	co3%	Code	Lithology	NP	3.0	15.0	12.0	NP	Np-AP	AG	2.5	45	54	335	82	82	W			
CEH00330	540	555	15	1.63	0.11	0.03	0.1	27 Monzonite	3.0	12.5	11.0	0.1	65	16	85	0	7	63	0	2	0	0			
CEH00330	625	640	15	3.62	0.06	0.03	0.05	27 Monzonite	3.74	0.44	0.1	0.41	0.25	51 Endoskam	4.2	-8.0	0.7	621	13	71	15	3			
CEH00330	640	650	10	3.74	0	0.44	0.1	41.0	42.57	0	2.5	0.12	2.48	0.18	62 Magnetite Sulf	76.3	3.0	-73.2	2	2984	43	302	56	12	
CEH00330	650	670	20	47.38	0	1.01	0.09	98.8	47.38	0	1.01	0.09	1.11	0.14	62 Magnetite Sulf	30.2	2.3	-27.8	2	3439	48	367	41	11	
CEH00330	670	685	15	42.44	0	1.14	0.09	1.11	42.44	0	1.14	0.09	1.11	0.14	62 Magnetite Sulf	34.2	7.8	-28.4	1.5	2521	37	342	54	8	
CEH00330	700	715	15	39.87	0	0.52	0.08	1.05	39.87	0	0.52	0.08	1.05	0.16	62 Magnetite Sulf	15.3	30.8	15.5	1	1938	45	430	51	63	
CEH00330	715	730	15	37.52	0	3.2	0.12	3.16	37.52	0	3.2	0.12	3.16	0.18	61 Pyrrhotite Sulf	98.1	6.3	-91.6	0.5	2851	71	529	53	8	
CEH00330	735	749	14	15.24	0	2.92	0.1	2.89	15.24	0	2.92	0.1	2.89	0.15	62 Magnetite Sulf	89.7	8.3	-81.4	0.5	2136	1	631	0	4	
CEH00330	754	773	19	4.82	0	0.24	0.03	2.23	4.82	0	0.24	0.03	2.23	1.4	27 Monzonite	7.0	23.3	16.3	3.7	150	77	265	171	1	
CEH00330	773	780	17	4.77	0	0.24	0.03	0.22	4.77	0	0.24	0.03	0.22	0.5	27 Monzonite	6.6	8.3	1.8	0.1	138	16	44	41	0	
CEH00330	780	800	10	5.62	0	0.25	0.05	0.24	5.62	0	0.25	0.05	0.24	0.95	27 Monzonite	7.3	15.8	8.5	0.5	170	16	87	77	0	
CEH00330	790	800	10	9.3	0	0.01	0.01	1.95	9.3	0	0.01	0.01	1.95	0.16	62 Magnetite Sulf	15.3	30.8	15.5	1	1938	45	430	51	63	
CEH00330	800	815	15	6.01	0	0.02	0.02	1.13	6.01	0	0.02	0.02	1.13	0.16	67 Oxide Ore	0.2	32.5	32.4	0.5	138	46	180	173	0	
CEH00330	815	830	15	8.55	0	0.01	0.02	0	8.55	0	0.01	0.02	0	0.1	67 Oxide Ore	0.3	18.8	18.5	0.9	75	36	175	315	5	
CEH00330	830	845	15	11.07	0	0.01	0.01	0.01	11.07	0	0.01	0.01	0.01	0.31	67 Oxide Ore	0.0	16.8	16.8	0.6	81	42	202	613	12	
CEH00330	845	860	15	15.2	0	0.01	0.01	0.01	15.2	0	0.01	0.01	0.01	0.23	67 Oxide Ore	0.2	5.2	5.0	0.6	173	52	224	951	0	
CEH00330	860	875	15	13.88	0	0.01	0.01	0.01	13.88	0	0.01	0.01	0.01	0.19	67 Oxide Ore	0.2	3.2	3.0	0	302	60	391	894	3	
CEH00330	875	890	15	25.1	0	0.02	0.01	0.02	25.1	0	0.02	0.01	0.02	0.7	67 Oxide Ore	0.5	11.7	11.2	1.4	12682	186	808	312	11	
CEH00334	40	55	15	17.05	0	0.02	0.02	0.01	17.05	0	0.02	0.02	0.01	0.94	67 Oxide Ore	0.3	15.7	15.4	0	4677	792	270	116	22	
CEH00334	55	75	20	8.55	0	0.01	0.02	0	8.55	0	0.01	0.02	0	0.1	62 Magnetite Sulf	92.5	7.8	-84.7	0	1773	25	270	116	22	
CEH00334	75	90	15	12.04	0	0.01	0.01	0.01	12.04	0	0.01	0.01	0.01	0.31	62 Magnetite Sulf	55.6	106.0	60.4	0	602	31	206	90	11	
CEH00334	90	105	15	15.2	0	0.01	0.01	0.01	15.2	0	0.01	0.01	0.01	0.23	67 Oxide Ore	0.2	3.8	3.7	0	302	60	391	894	3	
CEH00334	105	120	15	13.88	0	0.01	0.01	0.01	13.88	0	0.01	0.01	0.01	0.19	67 Oxide Ore	0.2	3.2	3.0	0	302	60	391	894	3	
CEH00334	120	135	15	25.1	0	0.02	0.01	0.02	25.1	0	0.02	0.01	0.02	0.7	67 Oxide Ore	0.5	11.7	11.2	1.4	12682	186	808	312	11	
CEH00334	135	150	20	6.5	0	0.04	0.18	2.98	17.05	0	0.04	0.18	2.98	0.47	62 Magnetite Sulf	92.5	145.0	16.4	0	4677	792	270	116	22	
CEH00334	150	165	20	8.55	0	0.01	0.02	0	8.55	0	0.01	0.02	0	0.1	62 Magnetite Sulf	92.5	145.0	16.4	0	4677	792	270	116	22	
CEH00334	165	180	20	7.84	0	0.01	0.02	0	7.84	0	0.01	0.02	0	0.1	62 Magnetite Sulf	92.5	145.0	16.4	0	4677	792	270	116	22	
CEH00334	180	195	20	12.04	0	0.01	0.01	0.01	12.04	0	0.01	0.01	0.01	0.31	67 Oxide Ore	0.2	5.2	5.0	0.6	173	52	224	951	0	
CEH00334	195	210	20	31.8	0	0.01	0.03	0.08	19.88	0	0.01	0.03	0.08	0.16	62 Magnetite Sulf	8.9	8.9	8.9	0.1	138	16	16	16	0	
CEH00334	210	225	20	4.77	0	0.01	0.02	0.12	4.77	0	0.01	0.02	0.12	0.13	62 Magnetite Sulf	41.4	352.4	30.8	0.8	144	50	219	66	11	
CEH00334	225	240	20	37.9	0	0.31	0.18	0.25	37.9	0	0.31	0.18	0.25	1.09	62 Magnetite Sulf	6.9	182.2	11.3	0.5	160	78	361	71	28	
CEH00334	240	255	20	32.4	0	0.01	0.02	0.02	32.4	0	0.01	0.02	0.02	0.94	62 Magnetite Sulf	228.6	145.0	-83.6	0.6	2863	84	283	94	37	
CEH00334	255	270	20	6.5	0	0.04	0.18	2.98	6.5	0	0.04	0.18	2.98	0.47	62 Magnetite Sulf	95.0	6.5	-88.5	0.6	2106	48	286	71	0	
CEH00334	270	285	20	12.04	0	0.01	0.01	0.01	12.04	0	0.01	0.01	0.01	0.31	62 Magnetite Sulf	117.0	4.5	-112.5	0	2223	45	236	43	0	
CEH00334	285	300	20	31.8	0	0.01	0.03	0.38	31.8	0	0.01	0.03	0.38	0.16	62 Magnetite Sulf	134.4	37.7	-86.7	1.2	2444	30	1043	42	68	
CEH00334	300	315	20	20	0	0.01	0.02	0.02	20	0	0.01	0.02	0.02	0.94	62 Magnetite Sulf	24.4	28.4	13.7	-12.7	1.1	1448	296	1122	35	0
CEH00334	315	330	20	37.9	0	0.01	0.02	0.02	37.9	0	0.01	0.02	0.02	0.94	62 Magnetite Sulf	8.1	9.2	1.0	0	670	44	420	38	0	
CEH00334	330	345	20	7.84	0	0.01	0.02	0	7.84	0	0.01	0.02	0	0.1	62 Magnetite Sulf	3.0	19.0	14.7	0	19	24	110	22	0	
CEH00334	345	360	20	11.05	0	0.01	0.04	0.02	11.05	0	0.01	0.04	0.02	0.03	62 Magnetite Sulf	0.9	168.2	15.2	0.1	40	30	63	45	0	
CEH00334	360	375	20	2.91	0	0.01	0.02	0.03	2.91	0	0.01	0.02	0.03	0.13	62 Magnetite Sulf	17.0	198.2	18.3	0.6	55	39	104	41	0	
CEH00334	375	390	20	2.91	0	0.01	0.02	0.03	2.91	0	0.01	0.02	0.03	0.13	62 Magnetite Sulf	0.9	94.5	93.6	0.1	49	34	123	48	0	
CEH00334	390	405	20	4.5	0	0.01	0.02	0.02	4.5	0	0.01	0.02	0.02	0.12	62 Magnetite Sulf	24.4	28.4	13.7	-12.7	1.1	1448	296	1122	35	0
CEH00334	405	420	20	6.3	0	0.01	0.02	0.03	6.3	0	0.01	0.02	0.03	0.16	62 Magnetite Sulf	8.1	9.2	1.0	0	670	44	420	38	0	
CEH00334	420	435	20	10.8	0	0.01	0.02	0.03	10.8	0	0.01	0.02	0.03	0.16	62 Magnetite Sulf	3.0	26.7	23.2	0.1	48	38	139	338	0	
CEH00334	435	450	20	12.04	0	0.01	0.02	0.03	12.04	0	0.01	0.02	0.03	0.16	62 Magnetite Sulf	1.2	7.3	7.3	0.1	40	30	63	45	0	
CEH00334	450	465	20	12.04	0	0.01	0.02	0.03	12.04	0	0.01	0.02	0.03	0.16	62 Magnetite Sulf	0.9	10.6	9.8	0.8	170	22	29	44	0	
CEH00334	465	480	20	12.04	0	0.01	0.02	0.03	12.04	0	0.01	0.02	0.03	0.16	62 Magnetite Sulf	3.1	37.2	32.0	0.5	30	24	47	147	0	
CEH00334	480	495	20	5.17	0	0.01	0.02	0.03	5.17	0	0.01	0.02	0.03	0.16	62 Magnetite Sulf	4.5	55.8	51.3	0.7	33	24	48	123	0	
CEH00334	495	510	20	6.11	0	0.01	0.02	0.03	6.11	0	0.01	0.02	0.03	0.16	62 Magnetite Sulf	3.3	49.3	30.7	0.1	48	24	38	139	338	
CEH00334	510	525	20	2.92	0	0.01	0.02	0.03	2.92	0	0.01	0.02	0.03	0.16	62 Magnetite Sulf	6.1	35.5	29.4	2	66	43	228	89	0	
CEH00334	525	540	20	4.62	0	0.01	0.02	0.03	4.62	0	0.01	0.02	0.03	0.16	62 Magnetite Sulf	2.7	49.0	48.0	0.7	41	31	132	141		

HoleId	From	To	Length	Length	fe%	fec%	so4%	st%	co3%	Code	Lithology	AP	NP	Np-AP	AG	0.5	38	333	36	986	2	W	
CEH0431	826	830	4	7.92	0	0.77	0.08	0.16	2.04	51	Endokam	28.1	19.3	-3.8	0.5	430	36	500	9.9	1786	13	0	
CEH0431	830	850	20	53.2	0	0.17	0.08	3.14	2.04	62	Magnetite Sulf	97.7	34.0	-63.6	0.9	1476	86	500	0	91	13	0	
CEH0431	850	861	11	21.2	0	1.83	0.14	1.78	1.07	62	Magnetite Sulf	55.0	17.8	-37.2	0.8	1793	31	1736	15	1813	13	0	
CEH0431	861	866	5	7.22	0	0.67	0.05	0.66	0.97	27	Monzonite	20.2	16.2	-4.0	0.9	1601	5	195	22	0	10	0	
CEH0431	866	875	9	4.03	0	0.23	0.02	0.22	0.92	27	Monzonite	6.9	15.3	8.5	0.5	126	13	108	36	0	8	0	
CEH0431	875	890	15	4.25	0	0.2	0.02	0.19	0.92	27	Monzonite	5.9	15.3	8.4	0.5	112	24	288	20	0	13	0	
CEH0431	890	902	5	6.6	0	0.05	0.02	0.02	1.12	27	Monzonite	1.3	18.7	17.4	0.1	27	24	50	41	0	12	0	
CEH0434	0	20	20	3.68	3	0.03	0.02	0.02	11.49	6	Alluvium	191.5	180.9	1.2	0.1	40	22	45	79	0	13	0	
CEH0434	20	35	15	4.42	0	0.06	0.02	0.05	3.1	17	Homfels, PZN	1.6	51.7	50.1	0.7	80	37	70	140	0	22	0	
CEH0434	35	50	15	2.05	1	0.03	0.02	0.02	1.02	27	Monzonite	0.6	17.0	16.4	0.1	73	16	42	50	0	10	0	
CEH0434	50	70	20	2.33	0	0.02	0.02	0.01	0.88	27	Monzonite	0.3	11.3	11.0	0.1	47	18	28	44	0	7	0	
CEH0434	70	217	222	5	2.53	0	0.77	0.02	0.76	5.87	27	Monzonite	23.8	97.9	74.1	0.9	96	22	27	54	0	6	0
CEH0434	217	278	283	5	2.84	0	0.05	0.02	0.04	2.81	27	Monzonite	1.3	46.8	45.6	0.1	21	17	31	24	0	8	0
CEH0434	278	305	10	2.68	0	0.1	0.02	0.09	3.01	27	Monzonite	50.2	47.4	0.1	86	15	38	29	0	5	0		
CEH0434	305	330	10	3.13	0	0.25	0.01	0.25	1.89	27	Monzonite	0.6	73.2	77.7	0.1	56	10	38	27	0	3	0	
CEH0434	330	373	5	4.3	0	0.08	0.03	0.02	4.17	27	Monzonite	2.5	69.5	67.0	0.1	16	19	48	23	0	4	0	
CEH0438	10	30	20	5.08	0	0.03	0.03	0.02	0.39	17	Homfels, PZN	0.5	8.5	8.0	0.1	47	18	28	44	0	6	0	
CEH0438	30	50	20	6.1	1	0	0.02	0	0.21	17	Homfels, PZN	-0.3	36.8	37.2	0.1	38	22	58	51	0	9	0	
CEH0438	50	85	15	5.98	1	0	0.02	0	4.48	17	Homfels, PZN	-0.3	74.3	74.7	0.1	21	17	31	24	0	6	0	
CEH0438	85	86	20	3.91	1	0	0.02	0	1.03	27	Monzonite	-0.3	17.2	17.5	0.1	90	26	90	125	0	10	0	
CEH0438	86	105	20	1.34	1	0.01	0.02	0	0.16	27	Monzonite	0.0	2.5	2.5	0.1	90	52	151	77.9	0	5	0	
CEH0438	105	125	20	1.62	1	0	0.02	0	0.1	27	Monzonite	-0.3	1.7	2.0	0.1	53	19	59	196	0	3	0	
CEH0438	125	128.5	134	5.6	27.4	0	0.01	0.01	0.01	7.84	9	Fault Gouge	0.2	127.4	127.2	0.2	30	67	42	51	0	3	0
CEH0438	128.5	134	165	21	4.67	2	0.01	0.02	0	24.01	10	Marble	0.0	3180	192	0.1	407	1	2829	10	0	49	0
CEH0438	165	170	15	5.66	3	0.01	0.02	0	0.15	24	Diorite	0.0	400.2	400.2	0.1	179	32	113	280	0	8	0	
CEH0438	170	180	10	3.33	1	0	0.02	0	0.15	24	Diorite	0.0	2.5	2.5	0.1	557	87	194	328	0	3	0	
CEH0438	180	183	13	0.55	0	0	0.01	0	0.16	24	Diorite	-0.3	0.8	1.1	0.1	53	16	70	125	0	1	0	
CEH0438	183	205	12	3.8	3	0.05	0.05	0.03	0.25	24	Diorite	-0.2	2.5	2.7	0.1	41	11	8	23	0	2	0	
CEH0438	205	220	15	3.74	1	0	0.01	0.02	0.05	4.95	17	Homfels, GT	0.0	82.5	82.5	0.1	40	18	68	214	0	6	0
CEH0438	220	238	18	8.28	1	0	0.01	0	0.28	17	Homfels, GT	0.0	406.2	406.2	0.1	24	70	201	660	0	1	0	
CEH0438	238	245	7	7.1	1	0.01	0.01	0.01	0.15	24	Diorite	-0.2	4.8	5.0	0.1	24	31	142	328	0	7	0	
CEH0438	245	265	10	3.83	1	0	0.02	0	0.1	24	Diorite	0.2	2.5	2.3	0.1	35	124	328	142	0	4	0	
CEH0438	265	262	7	2.03	1	0	0.01	0.02	0	0.15	27	Monzonite	-0.3	1.7	2.0	0.1	77	16	77	120	0	1	0
CEH0438	262	275	13	4.04	2	0	0.01	0	0.2	24	Diorite	-0.2	3.3	3.6	0.1	63	32	68	150	0	4	0	
CEH0438	275	288	13	4.08	3	0	0.03	0.02	0.02	0.05	24	Diorite	0.6	0.8	0.2	0.1	87	51	108	208	0	3	0
CEH0438	288	317	19	3.56	0	0.18	0.04	0.15	0.1	27	Monzonite	0.0	1.7	1.7	0.1	49	28	83	106	0	6	0	
CEH0438	317	335	18	3.44	0	0.83	0.08	0.81	0.05	24	Diorite	4.4	1.7	-2.7	0.8	54	13	58	83	0	9	0	
CEH0438	335	360	15	3.61	0	1.22	0.07	1.12	0.05	24	Diorite	25.0	0.8	-24.2	0.1	51	19	108	118	0	1	0	
CEH0438	360	395	400	5	4.4	0	2.08	0.08	2.05	2.5	24	Diorite	37.0	0.8	-38.2	4.6	103	23	143	170	0	2	0
CEH0438	395	425	15	4.58	0	0.88	0.05	0.86	0.83	24	Diorite	63.8	41.7	-22.1	0.1	45	21	109	108	0	1	0	
CEH0438	425	450	15	3.73	0	0.29	0.04	0.28	0.47	17	Homfels, PZN	28.7	13.8	-12.8	0.1	53	19	63	48	0	8	0	
CEH0438	450	480	15	3.85	0	0.36	0.06	0.34	2.21	17	Homfels, PZN	8.4	78.3	69.8	0.8	104	31	426	57	0	7	0	
CEH0438	480	495	15	5.83	0	1.2	0.09	1.17	1.32	17	Homfels, PZN	10.3	36.8	36.8	0.8	54	13	58	83	0	8	0	
CEH0438	495	515	20	0.89	0	0.26	0.05	0.24	43.9	10	Marble	36.1	22.0	-14.1	0.1	836	34	34	122	0	1	0	
CEH0438	515	585	605	20	0.91	0	0.54	0.08	0.32	48.94	10	Marble	7.3	731.8	724.5	0.1	1098	3	366	52	0	12	0
CEH0438	585	620	15	3.89	0	1.09	0.06	1.07	1.32	52	Exoskam	16.9	782.5	766.6	0.1	92	1	32	0	0	1	0	
CEH0438	620	650	15	1.92	0	0.17	0.04	0.16	0.73	52	Exoskam	33.1	22.0	-11.1	1	518	41	175	426	0	11	0	
CEH0438	650	730	20	33.8	0	0.19	0.08	0.16	1.86	24	Diorite	18.6	31.2	31.2	0.1	98	42	215	46	0	8	0	
CEH0438	730	765	15	4.54	0	0.33	0.05	0.51	2.74	51	Endokam	17.8	9.0	-8.8	0.1	29	24	68	29	0	10	0	
CEH0438	765	785	5	1.81	0	0.53	0.05	0.51	25.38	10	Marble	15.8	423.1	407.3	0.1	97	33	44	14	0	5	0	
CEH0438	785	870	5	2.88	0	0.34	0.03	0.33	2.79	27	Monzonite	10.2	48.5	38.4	0.5	151	21	42	52	0	1	0	
CEH0438	870	900	10	3.93	0	0.09	0.02	0.08	0.44	27	Monzonite	2.5	22.8	21.3	0.1	34	18	51	23	0	12	0	
CEH0438	900	912	12	5.6	0	0.15	0.03	0.14	0.84	27	Monzonite	4.2	10.7	6.5	0.1	111	17	89	25	0	4	0	
CEH0438	912	923	11	28.25	0	2.59	0.08	2.57	1.75	62	Magnetite Sulf	80.0	28.2	-50.8	3.3	3051	23	531	31	1	44	0	
CEH0438	923	939	16	30.3	0	0.75	0.02	0.74	5.29	62	Magnetite Sulf	23.1	88.2	65.1	3.8	2344	24	530	64	3	8	0	
CEH0438	939	955	16	3.36	0	0.31	0.04	0.3	45.13	10	Marble	9.1	762.3	743.3	2.4	1149	16	530	0	1	0	0	

HoleId	From	To	Length	Fe%	Fec%	Sc%	Sc%	Co%	Code	Lithology	AP	NP	Np-AP	AG	Cu	PB	ZN	AS	Bi	Co	Mn	Mo	Tc	W
CEH0438	985	970	15	12.14	0	1.48	0.08	1.45	28.94	10	Marble	45.0	49.1	45.1	7.2	3893	17	1284	13	0	23	1575	0	1
CEH0438	970	980	10	38.9	0	0.81	0.08	0.78	3.77	62	Magnetite Sulf	24.1	62.8	35.8	2.3	1387	51	1005	41	0	40	1779	5	18
CEH0438	980	985	5	29.55	0	0.79	0.04	0.76	0.82	62	Magnetite Sulf	24.1	13.7	-10.4	3.3	2751	12	1680	19	1	20	2472	1	0
CEH0438	1008	1008	0	27.02	0	1.37	0.04	1.35	3.84	62	Magnetite Sulf	42.2	60.7	18.6	5.7	2314	36	1383	104	1	28	2672	3	0
CEH0438	1008	1020	12	3	0	0.22	0.03	0.21	0.88	27	Monzonite	6.4	14.7	8.3	0.1	139	14	60	23	0	13	339	2	0
CEH0438	1020	1030	10	2.9	0	0.17	0.02	0.16	0.98	27	Monzonite	5.0	16.3	11.3	1.2	48	11	45	28	0	4	407	3	0
																							5	2

Appendix 2:

August 2005 Dewatering Test Results For Elkhorn Goldfields Sourdough Project

AUGUST 2005 DEWATERING TEST RESULTS FOR ELKHORN GOLDFIELDS SOURDOUGH PROJECT



Prepared for:

Elkhorn Goldfields
109 South Main Street
P.O. Box 41
Boulder, MT 59632

OCTOBER 2005

Hydrometrics, Inc. 
Consulting Scientists and Engineers

**AUGUST 2005 DEWATERING TEST RESULTS
FOR ELKHORN GOLDFIELDS
SOURDOUGH PROJECT**

Prepared for:

**Elkhorn Goldfields
109 S. Main Street
P.O. Box 41
Boulder, MT 59632**

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October 2005

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AUGUST 2005 DEWATERING TEST RESULTS

FOR ELKHORN GOLDFIELDS

SOURDOUGH PROJECT

1.0 INTRODUCTION

This report evaluates dewatering requirements for the Elkhorn Goldfields Sourdough Project based on the results of an extended pumping test conducted at the site from August 3 to August 22, 2005. The test was conducted on a 6-inch bedrock dewatering test well (DW-1) that was drilled in July 2005 to a depth of 440 feet. This well was estimated to produce 500+ gpm at the time of completion. A second well was scheduled to be drilled at that same time, but drilling was postponed until the first dewatering well could be tested to better assess potential dewatering requirements. This report describes the physical and hydrogeologic setting for the test, the pumping test layout and procedures, and the pumping test results. A dewatering assessment is developed based on the test results.

The Sourdough project site is located in Greyback Gulch approximately 1 mile northwest of the town of Elkhorn. The dewatering test well, DW-1, lies on a northwest facing slope at an elevation of approximately 6600 feet MSL. Elkhorn Goldfields has several other wells in the area that were installed in the late 1980's as part of baseline environmental investigations, and a more recent test well installed in October 2004 for an initial phase of the dewatering assessment. Well locations are shown in Figure 1 and completion information is summarized in Table 1.

The site has a shallow layer of colluvium approximately 20 feet thick overlying bedrock. The bedrock is a mixed sequence of plutonic intrusives (monzonite, and diorite) in contact with carbonates (marble and dolomite), hornfels (an alteration product of shale and impure carbonate units) and skarn deposits. The monzonite, diorite and hornfels appear to yield relatively small amounts of water compared to the carbonates and skarn deposit.

TABLE 1. WELL INFORMATION SUMMARY

Pump Test Designation	Name	Date Installed	Depth (ft)	Geologic Unit	Latitude	Longitude
DW-1	DW-1	Jun-05	440	Qtz Monzonite/ Limestone/Skarn	46°17' 03.28"	111° 57' 26.98"
OW-1	PW-1	Oct-04	345	Qtz Monzonite/Skarn	46°17' 03.55"	111° 57' 25.21"
OW-2a	MW-1	Aug-04	710	Qtz Monzonite/Diorite	46°17' 05.80"	111° 57' 24.14"
OW-2b	GFMW-1	Oct-88	300	Qtz Monzonite/Skarn	46°17' 05"	111° 57' 24"
OW-3	GFMW-2	Dec-88	180	Qtz Monzonite/Skarn	46°17' 06"	111° 57' 32"

A small perennial stream runs down Greyback Gulch. At the time of the pumping test stream flow in Greyback Gulch was 1 cfs. The water level in the adjacent well was approximately 16 feet below the stream level indicating that the creek on this reach is perched above the groundwater system.

The dewatering test well DW-1 was drilled in July 2005 to a depth of 440 feet. The well began producing water when the drilling depth reached about 200 feet, but flow rates were limited from the monzonite and hornfels encountered to this depth. Marble was encountered at 285 feet and a large increase in inflow was noted between 293 and 295 feet. The flow rate from the well at this depth was estimated at several hundred gallons per minute. The marble extended to a depth of 410 feet. Skarn was encountered from 405 to 410 feet. Flow testing at the base of this section indicated that the well was producing a total flow of 550+ gpm. Quartz monzonite was encountered below the skarn from 410 to 440 feet and appeared to contribute little additional flow. The well was screened from 200 to 260 and from 280 to 400 feet.

1.1 OBJECTIVES

An extended pumping test was conducted on well DW-1 from August 3 to August 22, 2005. The primary purpose of the test was to assess inflow rates after extended pumping, and to

determine the zone of dewatering. The test was also designed to provide data to assess additional issues, including:

- Long term dewatering rates;
- The quality of discharge after sustained pumping;
- The effect of pumping on adjacent surface water flows;
- LAD performance; and
- Infiltration capacity of soils.

1.2 TEST LAYOUT & PROCEDURES

A 25 hp submersible pump was installed in test well DW-1 for the purposes of this dewatering assessment. The pump intake was set at a depth of approximately 400 feet (Figure 2). Well DW-1 was instrumented with a datalogger to record water level fluctuations throughout the test. A digital paddlewheel flow meter was installed at the wellhead for measuring discharge rates during the test.

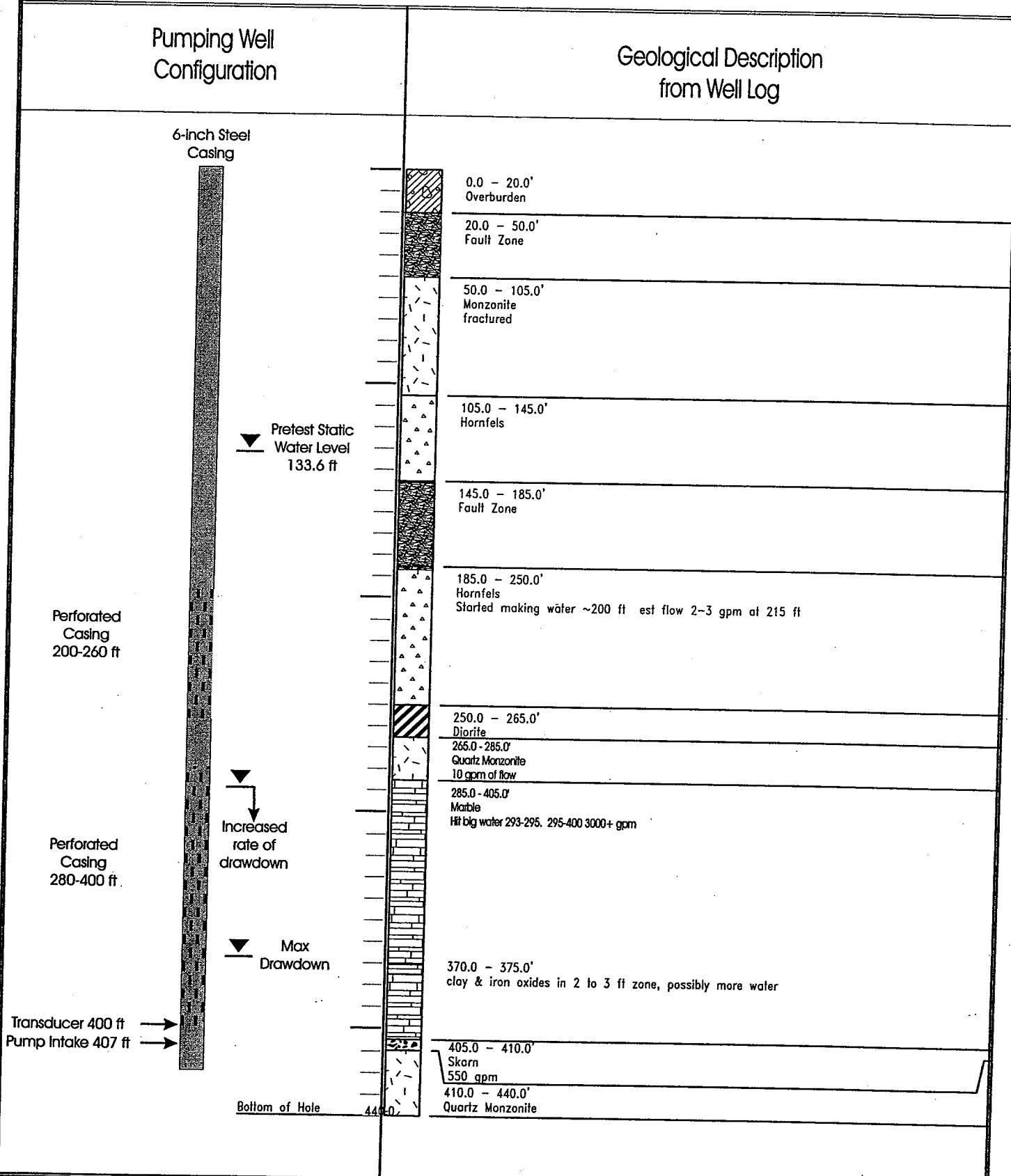
A second datalogger was installed in a nearby test well (shown as OW-1 in Figure 1) and manual water level measurements were taken at the other existing wells during the pumping test and during recovery. Stage measurements were taken in the stream in Greyback Gulch to document any effects to surface flow.

Water from the test was discharged to an HDPE pipeline that conveyed it to an LAD test site on the south side of the Elkhorn Goldfields property. Water was land applied during the pumping test through six high pressure spray heads over a broad area (see Figure 1). The LAD area was monitored during the test and the spray heads were adjusted as required for optimizing infiltration.

Water quality from the pumping well was sampled when the well was initially installed and then again in the early stages of the pumping test and at the end of the test to assess water

Pumping Well Configuration

Geological Description from Well Log



**August 2005 Dewatering Test
for Elkhorn Goldfields
Sourdough Project**

**PUMPING WELL
CONFIGURATION**

FIGURE

2

quality changes. Water quality was also sampled in the potable well near the mine office at the beginning and end of the test to identify any changes in groundwater quality due to LAD.

A series of infiltration test pits were excavated in the LAD area (Figure 1) and percolation tests were conducted during the pumping test to establish potential infiltration rates.

2.0 RESULTS

2.1 PUMPING TEST RESULTS

DW-1 was pumped for 19 days. A pumping rate of approximately 255 gpm was maintained over most of the test period. Pumping rates were decreased to approximately 135 gpm over a four day period in the middle of the test to accommodate wet weather and avoid over saturating soils in the LAD area. The pumping rate was increased after the wet weather cleared and pumping continued at approximately 250 gpm until the last day of the test when the well yield decreased to approximately 140 gpm as water levels dropped below the primary fracture system in the well. The test was concluded later that day and water level recovery was monitored.

Discharge rates and drawdown trends at the pumping well are shown in Figure 3. Water levels in the pumping well dropped at a relatively constant rate of 9 to 11 feet per day over most of the test. When pumping rates were decreased for four days in the middle of the test there was no short-term recovery response, just a decrease in the rate of drawdown. When pumping rates were adjusted back up, the rate of drawdown in the pumping well returned to approximately 10 feet per day. This linear drawdown trend is characteristic of dewatering a primary fracture system and indicates that most of the water is coming from short-term storage rather than regional inflow.

On day 19 of the test, water levels in the pumping well dropped 75 feet and approached the level of the pump intake. The increased rate of drawdown occurred when water levels in the pumping well fell below the upper contact of the marble where large inflows were encountered during well installation (see Figure 2). Flow rates were adjusted downward to prevent dewatering the pump, which produced a sharp recovery response. Drawdown in the lowest portion of the well was subject to large-scale fluctuations with small changes in pumping rate and consequently the test was ended to avoid dewatering the pump. Water levels rebounded almost immediately to the 400 foot level and then recovered at a rate of

approximately 4 feet per day gradually decreasing to 2 feet per day. One month after the test was completed all of the wells still exhibited substantial drawdown (Figure 3).

Drawdown in the well approximately 130 feet east of the pumping well (OW-1 on Figure 1) was virtually identical to drawdown in the pumping well over most of the test. In comparison, drawdown was minor (10 to 40 feet) at the two existing wells to the north (shown as OW-2A and OW-2B on Figure 1). The observation well next to the stream (shown as OW-3 on Figure 1) had approximately 2 feet of drawdown at the end of the test. The inferred drawdown extent is shown on a map in Figure 4. Drawdown data are included in Appendix A of this report.

There were no changes in surface water levels in Greyback Gulch during the test. This was expected since the groundwater levels were already below the streambed in this area at the start of the test.

2.2 WATER QUALITY RESULTS

Water quality sampling conducted prior to the test indicates that the water quality is good with the exception of arsenic, which was present in pretest samples at concentrations of 25 to 26 ug/L. Analytical test results are included in Appendix A. Water quality samples were collected several days into the test and at the conclusion of the test to see if discharge water quality improved with pumping. Arsenic concentrations had decreased to 12 ug/L after five days and decreased to 10 ug/L by the completion of the test. All other parameters remained within the regulatory limits. As we would anticipate, arsenic concentrations trend towards regional surface water quality as the ore body is dewatered and water is pulled in from surrounding units.

Water quality in the mine's potable well on the south end of the site was monitored at the beginning and end of the test to see if there was any change in water quality as a result of upgradient LAD testing. The samples showed no water quality change over the duration of the test. Arsenic was constant at 4 ug/L at this location. No well completion data appear to

be available for this well, but it was used as a monitoring point since it is immediately downslope of the LAD area and no other wells are present in this area.

2.3 LAD PERFORMANCE

The LAD system was effective at disposing of water on the south facing forested hillside of the Elkhorn Goldfields site when prevailing weather conditions were dry. However, a high level of operational oversight was required during wet periods to prevent oversaturating the soils. Discharge rates were reduced over a four day period in the middle of the test when conditions were particularly wet to avoid runoff. Although it appears possible to make adjustments to account for wet conditions, this test underscored the difficulty of operating an LAD system continuously on steep forested slopes. LAD is easiest to implement if it is one of several disposal options in a water management plan so that application rates can be reduced or a discharge alternative be provided during wet periods.

2.4 INFILTRATION TEST RESULTS

Direct infiltration to groundwater through infiltration trenches or buried diffuser lines is another potential alternative for water management. The infiltration test pits achieved infiltration rates ranging from 1 gpm to 50 gpm. Infiltration data for each test pit are summarized in Table 2 and locations are shown in Figure 1. Based on these results, higher permeability soils are present locally, but the majority of the sites were characterized by low infiltration rates.

TABLE 2. INFILTRATION TEST RESULTS

TP-1				TP-2				TP-3				TP-4											
Date	ET (sec)	DTW (ft)	RATE (ft/sec)	Date	ET (sec)	DTW	RATE (ft/sec)	Date	ET (sec)	DTW (ft)	RATE (ft/sec)	Date	ET (sec)	DTW (ft)	RATE (ft/sec)								
8/12/2005	0	4.7	0	8/11/2005	0	4.7	NA	8/11/2005	0	4.05	0	8/11/2005	0	3.5	0								
8/12/2005	1980	4.8	5.05E-05	8/11/2005	960	5.05	0.00036	8/11/2005	1440	4.15	6.94E-05	8/11/2005	180	3.55	2.78E-04								
8/12/2005	6720	4.85	2.23E-05	8/11/2005	2340	5.4	0.00030	8/11/2005	3480	4.33	8.05E-05	8/11/2005	420	3.6	2.38E-04								
8/13/2005	74880	5.25	7.35E-06	8/11/2005	4020	5.7	0.00025	8/11/2005	7080	6.15	2.97E-04	8/11/2005	3900	4	1.28E-04								
Average Rate (ft/sec): 2.67E-05				Average Rate (ft/sec): 0.00030				Average Rate (ft/sec): 1.49E-04				Average Rate (ft/sec): 1.37E-04											
Percolation Rate (gpm/ft ²) 0.012				Percolation Rate (gpm/ft ²) 0.137				Percolation Rate (gpm/ft ²) 0.067				Percolation Rate (gpm/ft ²) 0.089											
								Average Rate (ft/sec): 1.81E-04															
								Percolation Rate (gpm/ft ²) 0.081															
TP-5				TP-6				TP-7				TP-8											
Date	ET (sec)	DTW (ft)	RATE (ft/sec)	Date	ET (sec)	DTW (ft)	RATE (ft/sec)	Date	ET (sec)	DTW (ft)	RATE (ft/sec)	Date	ET (sec)	DTW (ft)	RATE (ft/sec)								
8/11/2005	0	4.55	0	8/12/2005	0	5.25	0	8/12/2005	0	6.7	0	8/12/2005	0	5.65	0								
8/11/2005	240	4.6	2.08E-04	8/12/2005	4980	5.35	2.01E-05	8/12/2005	1620	7.1	2.47E-04	8/12/2005	60	5.75	1.67E-03								
8/11/2005	360	4.64	2.50E-04	8/12/2005	7020	5.42	2.42E-05	8/12/2005	3000	7.5	2.67E-04	8/12/2005	2940	7.05	4.76E-04								
8/11/2005	5640	5.65	1.95E-04	8/13/2005	78840	6.7	1.84E-05	8/12/2005	5460	7.8	2.01E-04	Average Rate (ft/sec): 1.07E-03											
8/11/2005	10200	6	1.42E-04	Average Rate (ft/sec): 2.09E-05				Average Rate (ft/sec): 2.09E-04				Percolation Rate (gpm/ft ²) 0.107											
Average Rate (ft/sec): 1.99E-04				Percolation Rate (gpm/ft ²) 0.089				Percolation Rate (gpm/ft ²) 0.081				Percolation Rate (gpm/ft ²) 0.089											

3.0 DEWATERING ANALYSIS

Time-drawdown data from the pumping test were evaluated using conventional curve matching solutions for recovery data (Theis, 1935) and using a fractured bedrock analytical solution (Moench, 1984). The Theis recovery solution assumes that the bedrock aquifer is sufficiently fractured to behave like an equivalent porous media. This type of solution is best applied to bedrock systems when the cone of depression has expanded sufficiently that the area over which it is drawing water is large compared to the fracture spacing in the bedrock. This assumption does not accurately characterize the drawdown response at DW-1 and OW-1, which show a trend characteristic of dewatering a linear fracture rather than regional inflow. The recovery response was analyzed at these wells and it appeared to more closely approximate a typical Theis response curve. The dual porosity bedrock solution developed by Moench is a closer approximation to site conditions, but both the Theis recovery analysis and the Moench solutions yield similar hydraulic conductivities on the order of 0.1 to 0.2 ft/day. Since drawdown in the pumping well did not approach stabilization and show a trend indicative of regional inflow (pseudo-radial flow), analytical methods cannot be used to accurately project long term withdrawal rates from this well. However, based on the recovery response during this test, well DW-1 appears to be capable of sustaining a withdrawal rate between 100 and 120 gpm. The pumping rate could decrease further after extended pumping, but this value is a reasonably conservative estimate for purposes of planning.

One or more additional wells will be necessary to dewater the north end of the ore body. Previous tests at wells in this area have yielded less water than DW-1, but the actual rates will depend on fracture conditions at the dewatering well location. Assuming similar conditions to DW-1, the total discharge necessary to dewatering both wells would be on the order of 150 to 200 gpm. This should be verified through additional testing.

4.0 REFERENCES

- Moench, A.F., 1984. Double-porosity models for a fissured groundwater reservoir with fracture skin, Water Resources Research, vol. 20, no. 7, pp. 831-846.
- Theis, C.V., 1935. The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using groundwater storage, Am. Geophys. Union Trans., vol. 16, pp. 519-524.

APPENDIX A

AQUIFER TEST RESULTS

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/3/05 13:20	1.48	8/3/05 13:23	3.51	8/3/05 14:30	3.46
8/3/05 13:20	2.66	8/3/05 13:23	3.62	8/3/05 14:34	3.11
8/3/05 13:20	1.22	8/3/05 13:24	3.49	8/3/05 14:39	2.78
8/3/05 13:20	1.12	8/3/05 13:24	3.57	8/3/05 14:44	2.70
8/3/05 13:20	1.48	8/3/05 13:24	3.49	8/3/05 14:49	2.01
8/3/05 13:20	1.31	8/3/05 13:24	3.31	8/3/05 14:54	1.92
8/3/05 13:20	1.43	8/3/05 13:25	2.71	8/3/05 14:59	1.98
8/3/05 13:20	1.67	8/3/05 13:25	2.47	8/3/05 15:05	2.13
8/3/05 13:20	1.79	8/3/05 13:25	2.18	8/3/05 15:12	2.03
8/3/05 13:20	1.95	8/3/05 13:26	2.02	8/3/05 15:18	3.56
8/3/05 13:20	1.82	8/3/05 13:26	2.00	8/3/05 15:25	3.66
8/3/05 13:20	5.29	8/3/05 13:27	1.94	8/3/05 15:33	3.50
8/3/05 13:20	3.69	8/3/05 13:27	1.94	8/3/05 15:41	3.46
8/3/05 13:20	3.23	8/3/05 13:27	1.82	8/3/05 15:49	3.58
8/3/05 13:20	2.78	8/3/05 13:28	1.63	8/3/05 15:58	3.58
8/3/05 13:20	2.67	8/3/05 13:28	1.75	8/3/05 16:07	3.66
8/3/05 13:20	2.67	8/3/05 13:29	1.65	8/3/05 16:17	3.78
8/3/05 13:20	3.06	8/3/05 13:29	1.80	8/3/05 16:27	3.80
8/3/05 13:20	3.31	8/3/05 13:30	2.04	8/3/05 16:37	3.92
8/3/05 13:20	3.46	8/3/05 13:31	2.53	8/3/05 16:47	4.05
8/3/05 13:20	3.64	8/3/05 13:31	2.70	8/3/05 16:57	4.09
8/3/05 13:20	3.88	8/3/05 13:32	2.63	8/3/05 17:07	4.29
8/3/05 13:20	3.83	8/3/05 13:33	2.63	8/3/05 17:17	4.56
8/3/05 13:20	3.99	8/3/05 13:34	2.45	8/3/05 17:27	4.70
8/3/05 13:20	4.19	8/3/05 13:34	1.90	8/3/05 17:37	4.64
8/3/05 13:20	4.20	8/3/05 13:35	1.06	8/3/05 17:47	4.49
8/3/05 13:20	4.22	8/3/05 13:36	1.00	8/3/05 17:57	4.49
8/3/05 13:20	4.17	8/3/05 13:37	1.76	8/3/05 18:07	4.60
8/3/05 13:20	4.23	8/3/05 13:38	0.96	8/3/05 18:17	4.80
8/3/05 13:21	4.16	8/3/05 13:39	0.45	8/3/05 18:27	4.84
8/3/05 13:21	4.24	8/3/05 13:41	-0.18	8/3/05 18:37	4.92
8/3/05 13:21	4.23	8/3/05 13:42	-0.32	8/3/05 18:47	5.01
8/3/05 13:21	4.17	8/3/05 13:43	-0.02	8/3/05 18:57	4.94
8/3/05 13:21	4.24	8/3/05 13:45	2.15	8/3/05 19:07	4.99
8/3/05 13:21	4.28	8/3/05 13:46	1.88	8/3/05 19:17	5.13
8/3/05 13:21	4.36	8/3/05 13:48	1.92	8/3/05 19:27	5.27
8/3/05 13:21	4.27	8/3/05 13:49	1.84	8/3/05 19:37	5.35
8/3/05 13:21	4.37	8/3/05 13:51	2.25	8/3/05 19:47	5.31
8/3/05 13:21	4.14	8/3/05 13:53	1.82	8/3/05 19:57	5.52
8/3/05 13:21	4.18	8/3/05 13:55	1.84	8/3/05 20:07	5.49
8/3/05 13:21	4.30	8/3/05 13:57	2.19	8/3/05 20:17	6.35
8/3/05 13:22	4.21	8/3/05 13:59	1.98	8/3/05 20:27	6.31
8/3/05 13:22	4.19	8/3/05 14:02	1.78	8/3/05 20:37	7.85
8/3/05 13:22	4.00	8/3/05 14:04	1.82	8/3/05 20:47	7.93
8/3/05 13:22	4.24	8/3/05 14:07	2.08	8/3/05 20:57	8.01
8/3/05 13:22	4.00	8/3/05 14:10	2.00	8/3/05 21:07	8.17
8/3/05 13:22	3.95	8/3/05 14:13	2.45	8/3/05 21:17	8.23
8/3/05 13:22	3.93	8/3/05 14:16	2.99	8/3/05 21:27	8.13
8/3/05 13:23	3.79	8/3/05 14:19	3.01	8/3/05 21:37	8.25
8/3/05 13:23	3.58	8/3/05 14:23	3.11	8/3/05 21:47	8.38
8/3/05 13:23	3.50	8/3/05 14:26	3.13	8/3/05 21:57	8.46

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/3/05 22:07	8.56	8/4/05 6:37	12.16	8/4/05 15:07	13.63
8/3/05 22:17	8.56	8/4/05 6:47	12.05	8/4/05 15:17	13.65
8/3/05 22:27	8.62	8/4/05 6:57	12.16	8/4/05 15:27	13.75
8/3/05 22:37	8.87	8/4/05 7:07	12.14	8/4/05 15:37	13.85
8/3/05 22:47	8.85	8/4/05 7:17	12.14	8/4/05 15:47	13.79
8/3/05 22:57	9.03	8/4/05 7:27	12.34	8/4/05 15:57	13.92
8/3/05 23:07	8.89	8/4/05 7:37	12.46	8/4/05 16:07	14.02
8/3/05 23:17	9.03	8/4/05 7:47	12.46	8/4/05 16:17	14.00
8/3/05 23:27	9.26	8/4/05 7:57	12.57	8/4/05 16:27	14.20
8/3/05 23:37	9.33	8/4/05 8:07	12.67	8/4/05 16:37	14.10
8/3/05 23:47	9.36	8/4/05 8:17	12.65	8/4/05 16:47	14.22
8/3/05 23:57	9.42	8/4/05 8:27	12.18	8/4/05 16:57	14.14
8/4/05 0:07	9.52	8/4/05 8:37	12.05	8/4/05 17:07	14.33
8/4/05 0:17	9.66	8/4/05 8:47	11.54	8/4/05 17:17	14.41
8/4/05 0:27	9.64	8/4/05 8:57	13.22	8/4/05 17:27	14.47
8/4/05 0:37	9.81	8/4/05 9:07	11.28	8/4/05 17:37	14.55
8/4/05 0:47	9.78	8/4/05 9:17	11.44	8/4/05 17:47	14.71
8/4/05 0:57	9.81	8/4/05 9:27	11.59	8/4/05 17:57	14.61
8/4/05 1:07	9.91	8/4/05 9:37	11.85	8/4/05 18:07	14.63
8/4/05 1:17	9.87	8/4/05 9:47	11.75	8/4/05 18:17	14.63
8/4/05 1:27	9.97	8/4/05 9:57	11.73	8/4/05 18:27	14.70
8/4/05 1:37	10.07	8/4/05 10:07	11.93	8/4/05 18:37	14.84
8/4/05 1:47	10.26	8/4/05 10:17	11.85	8/4/05 18:47	14.80
8/4/05 1:57	10.30	8/4/05 10:27	11.87	8/4/05 18:57	14.96
8/4/05 2:07	10.21	8/4/05 10:37	12.09	8/4/05 19:07	15.02
8/4/05 2:17	10.48	8/4/05 10:47	12.09	8/4/05 19:17	14.96
8/4/05 2:27	10.40	8/4/05 10:57	12.34	8/4/05 19:27	15.14
8/4/05 2:37	10.44	8/4/05 11:07	12.14	8/4/05 19:37	15.55
8/4/05 2:47	10.56	8/4/05 11:17	12.34	8/4/05 19:47	15.53
8/4/05 2:57	10.69	8/4/05 11:27	12.34	8/4/05 19:57	15.66
8/4/05 3:07	10.66	8/4/05 11:37	12.36	8/4/05 20:07	15.53
8/4/05 3:17	10.77	8/4/05 11:47	12.44	8/4/05 20:17	15.66
8/4/05 3:27	10.93	8/4/05 11:57	12.46	8/4/05 20:27	15.64
8/4/05 3:37	10.91	8/4/05 12:07	12.48	8/4/05 20:37	15.66
8/4/05 3:47	10.97	8/4/05 12:17	12.55	8/4/05 20:47	15.80
8/4/05 3:57	10.97	8/4/05 12:27	12.63	8/4/05 20:57	15.94
8/4/05 4:07	11.24	8/4/05 12:37	12.73	8/4/05 21:07	15.92
8/4/05 4:17	11.16	8/4/05 12:47	12.87	8/4/05 21:17	15.98
8/4/05 4:27	11.24	8/4/05 12:57	12.85	8/4/05 21:27	16.13
8/4/05 4:37	11.28	8/4/05 13:07	12.75	8/4/05 21:37	16.13
8/4/05 4:47	11.38	8/4/05 13:17	13.00	8/4/05 21:47	16.19
8/4/05 4:57	11.32	8/4/05 13:27	13.12	8/4/05 21:57	16.41
8/4/05 5:07	11.38	8/4/05 13:37	13.06	8/4/05 22:07	16.33
8/4/05 5:17	11.62	8/4/05 13:47	13.22	8/4/05 22:17	16.43
8/4/05 5:27	11.52	8/4/05 13:57	13.14	8/4/05 22:27	16.39
8/4/05 5:37	11.75	8/4/05 14:07	13.18	8/4/05 22:37	16.41
8/4/05 5:47	11.71	8/4/05 14:17	13.40	8/4/05 22:47	16.49
8/4/05 5:57	11.93	8/4/05 14:27	13.36	8/4/05 22:57	16.74
8/4/05 6:07	11.87	8/4/05 14:37	13.49	8/4/05 23:07	16.72
8/4/05 6:17	11.89	8/4/05 14:47	13.51	8/4/05 23:17	16.78
8/4/05 6:27	11.95	8/4/05 14:57	13.59	8/4/05 23:27	16.76

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/4/05 23:37	16.76	8/5/05 8:07	20.18	8/5/05 16:37	23.45
8/4/05 23:47	16.86	8/5/05 8:17	19.85	8/5/05 16:47	23.49
8/4/05 23:57	17.03	8/5/05 8:27	20.06	8/5/05 16:57	23.47
8/5/05 0:07	16.88	8/5/05 8:37	20.12	8/5/05 17:07	23.62
8/5/05 0:17	17.09	8/5/05 8:47	20.55	8/5/05 17:17	23.68
8/5/05 0:27	17.09	8/5/05 8:57	20.34	8/5/05 17:27	23.76
8/5/05 0:37	17.21	8/5/05 9:07	20.55	8/5/05 17:37	23.76
8/5/05 0:47	17.42	8/5/05 9:17	20.65	8/5/05 17:47	23.70
8/5/05 0:57	17.35	8/5/05 9:27	20.65	8/5/05 17:57	24.04
8/5/05 1:07	17.40	8/5/05 9:37	20.75	8/5/05 18:07	23.90
8/5/05 1:17	17.50	8/5/05 9:47	20.91	8/5/05 18:17	24.08
8/5/05 1:27	17.46	8/5/05 9:57	20.93	8/5/05 18:27	24.09
8/5/05 1:37	17.56	8/5/05 10:07	21.06	8/5/05 18:37	25.20
8/5/05 1:47	17.70	8/5/05 10:17	20.96	8/5/05 18:47	23.94
8/5/05 1:57	17.72	8/5/05 10:27	21.14	8/5/05 18:57	24.07
8/5/05 2:07	17.74	8/5/05 10:37	21.20	8/5/05 19:07	24.04
8/5/05 2:17	17.87	8/5/05 10:47	21.34	8/5/05 19:17	24.25
8/5/05 2:27	17.89	8/5/05 10:57	21.26	8/5/05 19:27	24.23
8/5/05 2:37	17.76	8/5/05 11:07	21.26	8/5/05 19:37	24.43
8/5/05 2:47	18.11	8/5/05 11:17	21.32	8/5/05 19:47	24.43
8/5/05 2:57	18.17	8/5/05 11:27	21.43	8/5/05 19:57	24.51
8/5/05 3:07	17.99	8/5/05 11:37	21.47	8/5/05 20:07	24.72
8/5/05 3:17	18.15	8/5/05 11:47	21.55	8/5/05 20:17	24.80
8/5/05 3:27	18.25	8/5/05 11:57	21.61	8/5/05 20:27	24.80
8/5/05 3:37	18.38	8/5/05 12:07	21.69	8/5/05 20:37	24.90
8/5/05 3:47	18.40	8/5/05 12:17	21.84	8/5/05 20:47	24.92
8/5/05 3:57	18.50	8/5/05 12:27	21.89	8/5/05 20:57	25.01
8/5/05 4:07	18.66	8/5/05 12:37	21.84	8/5/05 21:07	25.07
8/5/05 4:17	18.66	8/5/05 12:47	21.88	8/5/05 21:17	25.11
8/5/05 4:27	18.87	8/5/05 12:57	22.10	8/5/05 21:27	25.19
8/5/05 4:37	18.70	8/5/05 13:07	22.08	8/5/05 21:37	25.15
8/5/05 4:47	18.77	8/5/05 13:17	22.25	8/5/05 21:47	25.36
8/5/05 4:57	18.83	8/5/05 13:27	22.14	8/5/05 21:57	25.23
8/5/05 5:07	18.87	8/5/05 13:37	22.29	8/5/05 22:07	25.44
8/5/05 5:17	18.95	8/5/05 13:47	22.31	8/5/05 22:17	25.44
8/5/05 5:27	19.20	8/5/05 13:57	22.43	8/5/05 22:27	25.48
8/5/05 5:37	19.09	8/5/05 14:07	22.55	8/5/05 22:37	25.52
8/5/05 5:47	19.07	8/5/05 14:17	22.53	8/5/05 22:47	25.72
8/5/05 5:57	19.13	8/5/05 14:27	22.63	8/5/05 22:57	25.62
8/5/05 6:07	19.15	8/5/05 14:37	22.71	8/5/05 23:07	25.91
8/5/05 6:17	19.30	8/5/05 14:47	22.65	8/5/05 23:17	25.89
8/5/05 6:27	19.40	8/5/05 14:57	22.73	8/5/05 23:27	25.95
8/5/05 6:37	19.36	8/5/05 15:07	22.67	8/5/05 23:37	26.03
8/5/05 6:47	19.54	8/5/05 15:17	22.86	8/5/05 23:47	26.25
8/5/05 6:57	19.56	8/5/05 15:27	22.96	8/5/05 23:57	26.25
8/5/05 7:07	19.56	8/5/05 15:37	23.12	8/6/05 0:07	26.32
8/5/05 7:17	19.73	8/5/05 15:47	23.10	8/6/05 0:17	26.29
8/5/05 7:27	19.81	8/5/05 15:57	23.16	8/6/05 0:27	26.25
8/5/05 7:37	19.81	8/5/05 16:07	23.16	8/6/05 0:37	26.46
8/5/05 7:47	19.95	8/5/05 16:17	23.39	8/6/05 0:47	26.56
8/5/05 7:57	19.99	8/5/05 16:27	23.41	8/6/05 0:57	26.52

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/6/05 1:07	26.72	8/6/05 9:37	29.86	8/6/05 18:07	32.64
8/6/05 1:17	26.60	8/6/05 9:47	29.90	8/6/05 18:17	32.74
8/6/05 1:27	26.72	8/6/05 9:57	29.88	8/6/05 18:27	32.74
8/6/05 1:37	26.81	8/6/05 10:07	29.92	8/6/05 18:37	32.91
8/6/05 1:47	26.91	8/6/05 10:17	29.96	8/6/05 18:47	32.85
8/6/05 1:57	26.97	8/6/05 10:27	30.00	8/6/05 18:57	33.03
8/6/05 2:07	26.99	8/6/05 10:37	30.10	8/6/05 19:07	33.21
8/6/05 2:17	27.22	8/6/05 10:47	30.18	8/6/05 19:17	33.25
8/6/05 2:27	27.17	8/6/05 10:57	30.37	8/6/05 19:27	33.38
8/6/05 2:37	27.22	8/6/05 11:07	30.22	8/6/05 19:37	33.30
8/6/05 2:47	27.38	8/6/05 11:17	30.45	8/6/05 19:47	33.52
8/6/05 2:57	27.24	8/6/05 11:27	30.51	8/6/05 19:57	33.40
8/6/05 3:07	27.42	8/6/05 11:37	30.51	8/6/05 20:07	34.11
8/6/05 3:17	27.38	8/6/05 11:47	30.51	8/6/05 20:17	33.44
8/6/05 3:27	27.46	8/6/05 11:57	30.63	8/6/05 20:27	33.62
8/6/05 3:37	27.58	8/6/05 12:07	30.67	8/6/05 20:37	33.60
8/6/05 3:47	27.67	8/6/05 12:17	30.80	8/6/05 20:47	33.73
8/6/05 3:57	27.62	8/6/05 12:27	30.76	8/6/05 20:57	33.68
8/6/05 4:07	27.73	8/6/05 12:37	30.90	8/6/05 21:07	33.81
8/6/05 4:17	27.77	8/6/05 12:47	30.94	8/6/05 21:17	33.83
8/6/05 4:27	27.91	8/6/05 12:57	30.90	8/6/05 21:27	33.97
8/6/05 4:37	28.01	8/6/05 13:07	31.02	8/6/05 21:37	34.05
8/6/05 4:47	27.95	8/6/05 13:17	31.14	8/6/05 21:47	33.99
8/6/05 4:57	28.07	8/6/05 13:27	31.17	8/6/05 21:57	34.11
8/6/05 5:07	28.16	8/6/05 13:37	31.17	8/6/05 22:07	34.24
8/6/05 5:17	28.16	8/6/05 13:47	31.31	8/6/05 22:17	34.24
8/6/05 5:27	27.99	8/6/05 13:57	31.39	8/6/05 22:27	34.36
8/6/05 5:37	28.22	8/6/05 14:07	31.43	8/6/05 22:37	34.40
8/6/05 5:47	28.18	8/6/05 14:17	31.57	8/6/05 22:47	34.42
8/6/05 5:57	28.36	8/6/05 14:27	31.53	8/6/05 22:57	34.56
8/6/05 6:07	28.42	8/6/05 14:37	31.74	8/6/05 23:07	34.79
8/6/05 6:17	28.55	8/6/05 14:47	31.68	8/6/05 23:17	34.71
8/6/05 6:27	28.44	8/6/05 14:57	31.66	8/6/05 23:27	34.77
8/6/05 6:37	28.65	8/6/05 15:07	31.86	8/6/05 23:37	34.63
8/6/05 6:47	28.71	8/6/05 15:17	31.76	8/6/05 23:47	34.89
8/6/05 6:57	28.71	8/6/05 15:27	32.02	8/6/05 23:57	34.79
8/6/05 7:07	28.79	8/6/05 15:37	31.96	8/7/05 0:07	35.06
8/6/05 7:17	28.83	8/6/05 15:47	32.23	8/7/05 0:17	35.12
8/6/05 7:27	28.87	8/6/05 15:57	32.02	8/7/05 0:27	35.10
8/6/05 7:37	28.93	8/6/05 16:07	32.31	8/7/05 0:37	35.44
8/6/05 7:47	29.08	8/6/05 16:17	32.35	8/7/05 0:47	35.18
8/6/05 7:57	29.12	8/6/05 16:27	32.33	8/7/05 0:57	35.57
8/6/05 8:07	29.18	8/6/05 16:37	32.41	8/7/05 1:07	35.40
8/6/05 8:17	29.20	8/6/05 16:47	32.58	8/7/05 1:17	35.53
8/6/05 8:27	29.28	8/6/05 16:57	32.72	8/7/05 1:27	35.46
8/6/05 8:37	29.41	8/6/05 17:07	32.40	8/7/05 1:37	35.75
8/6/05 8:47	29.49	8/6/05 17:17	32.44	8/7/05 1:47	35.67
8/6/05 8:57	29.38	8/6/05 17:27	32.33	8/7/05 1:57	35.71
8/6/05 9:07	29.57	8/6/05 17:37	32.50	8/7/05 2:07	35.98
8/6/05 9:17	29.57	8/6/05 17:47	32.54	8/7/05 2:17	35.79
8/6/05 9:27	29.71	8/6/05 17:57	32.64	8/7/05 2:27	36.02

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/7/05 2:37	35.89	8/7/05 11:07	39.58	8/7/05 19:37	43.65
8/7/05 2:47	36.20	8/7/05 11:17	39.78	8/7/05 19:47	43.53
8/7/05 2:57	36.12	8/7/05 11:27	39.68	8/7/05 19:57	43.55
8/7/05 3:07	36.20	8/7/05 11:37	39.82	8/7/05 20:07	43.51
8/7/05 3:17	36.34	8/7/05 11:47	39.80	8/7/05 20:17	44.51
8/7/05 3:27	36.41	8/7/05 11:57	39.89	8/7/05 20:27	44.08
8/7/05 3:37	36.39	8/7/05 12:07	40.03	8/7/05 20:37	43.96
8/7/05 3:47	36.37	8/7/05 12:17	40.07	8/7/05 20:47	34.72
8/7/05 3:57	36.49	8/7/05 12:27	40.13	8/7/05 20:57	44.14
8/7/05 4:07	36.63	8/7/05 12:37	40.23	8/7/05 21:07	43.68
8/7/05 4:17	36.88	8/7/05 12:47	40.31	8/7/05 21:17	43.65
8/7/05 4:27	36.67	8/7/05 12:57	40.36	8/7/05 21:27	43.84
8/7/05 4:37	36.63	8/7/05 13:07	40.82	8/7/05 21:37	43.82
8/7/05 4:47	36.77	8/7/05 13:17	40.77	8/7/05 21:47	43.96
8/7/05 4:57	36.84	8/7/05 13:27	40.70	8/7/05 21:57	44.02
8/7/05 5:07	37.08	8/7/05 13:37	40.74	8/7/05 22:07	44.12
8/7/05 5:17	36.98	8/7/05 13:47	40.95	8/7/05 22:17	44.14
8/7/05 5:27	37.16	8/7/05 13:57	41.05	8/7/05 22:27	44.14
8/7/05 5:37	37.22	8/7/05 14:07	41.01	8/7/05 22:37	44.45
8/7/05 5:47	37.20	8/7/05 14:17	41.24	8/7/05 22:47	44.39
8/7/05 5:57	37.43	8/7/05 14:27	41.28	8/7/05 22:57	44.47
8/7/05 6:07	37.37	8/7/05 14:37	41.32	8/7/05 23:07	44.74
8/7/05 6:17	37.61	8/7/05 14:47	41.38	8/7/05 23:17	44.67
8/7/05 6:27	37.53	8/7/05 14:57	41.38	8/7/05 23:27	44.74
8/7/05 6:37	37.63	8/7/05 15:07	41.40	8/7/05 23:37	45.04
8/7/05 6:47	37.72	8/7/05 15:17	41.54	8/7/05 23:47	45.15
8/7/05 6:57	37.78	8/7/05 15:27	41.58	8/7/05 23:57	44.94
8/7/05 7:07	37.92	8/7/05 15:37	41.75	8/8/05 0:07	45.02
8/7/05 7:17	37.94	8/7/05 15:47	41.69	8/8/05 0:17	45.21
8/7/05 7:27	37.96	8/7/05 15:57	42.05	8/8/05 0:27	45.25
8/7/05 7:37	38.10	8/7/05 16:07	41.81	8/8/05 0:37	45.31
8/7/05 7:47	38.10	8/7/05 16:17	41.99	8/8/05 0:47	45.43
8/7/05 7:57	38.13	8/7/05 16:27	41.93	8/8/05 0:57	45.39
8/7/05 8:07	38.29	8/7/05 16:37	42.20	8/8/05 1:07	45.45
8/7/05 8:17	38.39	8/7/05 16:47	42.20	8/8/05 1:17	45.72
8/7/05 8:27	38.55	8/7/05 16:57	42.57	8/8/05 1:27	45.66
8/7/05 8:37	38.35	8/7/05 17:07	42.42	8/8/05 1:37	45.51
8/7/05 8:47	38.53	8/7/05 17:17	42.73	8/8/05 1:47	45.97
8/7/05 8:57	38.72	8/7/05 17:27	42.55	8/8/05 1:57	45.76
8/7/05 9:07	38.76	8/7/05 17:37	42.83	8/8/05 2:07	45.90
8/7/05 9:17	38.68	8/7/05 17:47	42.57	8/8/05 2:17	46.15
8/7/05 9:27	38.86	8/7/05 17:57	42.61	8/8/05 2:27	46.21
8/7/05 9:37	38.82	8/7/05 18:07	42.87	8/8/05 2:37	46.13
8/7/05 9:47	38.96	8/7/05 18:17	42.79	8/8/05 2:47	46.27
8/7/05 9:57	39.03	8/7/05 18:27	43.04	8/8/05 2:57	46.27
8/7/05 10:07	39.11	8/7/05 18:37	42.93	8/8/05 3:07	46.35
8/7/05 10:17	39.29	8/7/05 18:47	43.06	8/8/05 3:17	46.76
8/7/05 10:27	39.37	8/7/05 18:57	43.00	8/8/05 3:27	46.50
8/7/05 10:37	39.27	8/7/05 19:07	43.24	8/8/05 3:37	46.90
8/7/05 10:47	39.37	8/7/05 19:17	43.36	8/8/05 3:47	46.58
8/7/05 10:57	39.48	8/7/05 19:27	43.32	8/8/05 3:57	46.76

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/05 4:07	46.84	8/05 12:37	51.30	8/05 21:07	55.64
8/05 4:17	47.07	8/05 12:47	51.51	8/05 21:17	55.62
8/05 4:27	46.95	8/05 12:57	51.37	8/05 21:27	55.73
8/05 4:37	47.03	8/05 13:07	51.37	8/05 21:37	55.85
8/05 4:47	47.38	8/05 13:17	51.47	8/05 21:47	55.97
8/05 4:57	47.32	8/05 13:27	51.59	8/05 21:57	56.03
8/05 5:07	47.38	8/05 13:37	51.76	8/05 22:07	56.14
8/05 5:17	47.34	8/05 13:47	51.96	8/05 22:17	56.14
8/05 5:27	47.58	8/05 13:57	51.98	8/05 22:27	56.28
8/05 5:37	47.54	8/05 14:07	52.12	8/05 22:37	56.38
8/05 5:47	47.44	8/05 14:17	52.00	8/05 22:47	56.50
8/05 5:57	47.62	8/05 14:27	52.08	8/05 22:57	56.61
8/05 6:07	47.68	8/05 14:37	52.29	8/05 23:07	56.65
8/05 6:17	47.64	8/05 14:47	52.43	8/05 23:17	56.73
8/05 6:27	48.07	8/05 14:57	52.43	8/05 23:27	56.85
8/05 6:37	48.17	8/05 15:07	52.45	8/05 23:37	56.77
8/05 6:47	48.01	8/05 15:17	52.72	8/05 23:47	56.91
8/05 6:57	48.07	8/05 15:27	52.72	8/05 23:57	56.93
8/05 7:07	48.36	8/05 15:37	52.72	8/05 0:07	57.12
8/05 7:17	48.19	8/05 15:47	53.13	8/05 0:17	57.22
8/05 7:27	48.42	8/05 15:57	53.11	8/05 0:27	57.34
8/05 7:37	48.48	8/05 16:07	53.37	8/05 0:37	57.40
8/05 7:47	48.46	8/05 16:17	53.56	8/05 0:47	57.47
8/05 7:57	48.71	8/05 16:27	53.56	8/05 0:57	57.55
8/05 8:07	49.16	8/05 16:37	53.94	8/05 1:07	57.75
8/05 8:17	48.97	8/05 16:47	53.68	8/05 1:17	57.75
8/05 8:27	48.97	8/05 16:57	53.68	8/05 1:27	57.79
8/05 8:37	48.97	8/05 17:07	53.66	8/05 1:37	57.96
8/05 8:47	49.11	8/05 17:17	53.84	8/05 1:47	58.00
8/05 8:57	49.18	8/05 17:27	53.88	8/05 1:57	58.06
8/05 9:07	49.40	8/05 17:37	53.97	8/05 2:07	58.18
8/05 9:17	49.48	8/05 17:47	54.03	8/05 2:17	58.35
8/05 9:27	49.52	8/05 17:57	54.05	8/05 2:27	58.28
8/05 9:37	49.77	8/05 18:07	54.07	8/05 2:37	58.41
8/05 9:47	49.89	8/05 18:17	54.40	8/05 2:47	58.45
8/05 9:57	49.71	8/05 18:27	54.44	8/05 2:57	58.67
8/05 10:07	49.91	8/05 18:37	54.68	8/05 3:07	58.69
8/05 10:17	50.12	8/05 18:47	54.52	8/05 3:17	58.65
8/05 10:27	49.95	8/05 18:57	54.56	8/05 3:27	58.82
8/05 10:37	50.12	8/05 19:07	54.70	8/05 3:37	58.98
8/05 10:47	50.28	8/05 19:17	54.93	8/05 3:47	58.98
8/05 10:57	50.16	8/05 19:27	54.91	8/05 3:57	59.12
8/05 11:07	50.55	8/05 19:37	54.93	8/05 4:07	59.10
8/05 11:17	50.40	8/05 19:47	55.13	8/05 4:17	59.25
8/05 11:27	49.59	8/05 19:57	55.11	8/05 4:27	59.33
8/05 11:37	51.16	8/05 20:07	55.13	8/05 4:37	59.37
8/05 11:47	50.65	8/05 20:17	55.34	8/05 4:47	59.57
8/05 11:57	50.87	8/05 20:27	55.36	8/05 4:57	59.66
8/05 12:07	51.14	8/05 20:37	55.40	8/05 5:07	59.66
8/05 12:17	51.10	8/05 20:47	55.50	8/05 5:17	59.70
8/05 12:27	51.30	8/05 20:57	55.48	8/05 5:27	59.94

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/9/05 5:37	59.96	8/9/05 14:07	63.98	8/9/05 22:37	69.01
8/9/05 5:47	60.11	8/9/05 14:17	63.77	8/9/05 22:47	68.99
8/9/05 5:57	60.21	8/9/05 14:27	64.14	8/9/05 22:57	69.07
8/9/05 6:07	60.15	8/9/05 14:37	64.08	8/9/05 23:07	69.19
8/9/05 6:17	60.33	8/9/05 14:47	64.10	8/9/05 23:17	69.40
8/9/05 6:27	60.39	8/9/05 14:57	64.41	8/9/05 23:27	69.36
8/9/05 6:37	60.43	8/9/05 15:07	64.41	8/9/05 23:37	69.42
8/9/05 6:47	60.62	8/9/05 15:17	65.06	8/9/05 23:47	69.54
8/9/05 6:57	60.70	8/9/05 15:27	65.22	8/9/05 23:57	69.73
8/9/05 7:07	60.76	8/9/05 15:37	65.20	8/10/05 0:07	69.97
8/9/05 7:17	60.82	8/9/05 15:47	65.31	8/10/05 0:17	69.71
8/9/05 7:27	61.01	8/9/05 15:57	65.14	8/10/05 0:27	69.87
8/9/05 7:37	61.11	8/9/05 16:07	65.29	8/10/05 0:37	69.95
8/9/05 7:47	61.17	8/9/05 16:17	65.45	8/10/05 0:47	69.99
8/9/05 7:57	51.71	8/9/05 16:27	65.59	8/10/05 0:57	70.20
8/9/05 8:07	60.74	8/9/05 16:37	65.51	8/10/05 1:07	70.16
8/9/05 8:17	59.39	8/9/05 16:47	65.67	8/10/05 1:17	70.40
8/9/05 8:27	60.42	8/9/05 16:57	65.73	8/10/05 1:27	70.50
8/9/05 8:37	60.58	8/9/05 17:07	65.98	8/10/05 1:37	70.52
8/9/05 8:47	60.93	8/9/05 17:17	66.39	8/10/05 1:47	70.48
8/9/05 8:57	60.68	8/9/05 17:27	66.51	8/10/05 1:57	70.73
8/9/05 9:07	61.40	8/9/05 17:37	66.23	8/10/05 2:07	70.93
8/9/05 9:17	60.99	8/9/05 17:47	66.53	8/10/05 2:17	71.04
8/9/05 9:27	61.09	8/9/05 17:57	66.74	8/10/05 2:27	70.97
8/9/05 9:37	61.23	8/9/05 18:07	66.84	8/10/05 2:37	71.16
8/9/05 9:47	61.25	8/9/05 18:17	66.80	8/10/05 2:47	71.22
8/9/05 9:57	61.44	8/9/05 18:27	66.70	8/10/05 2:57	71.24
8/9/05 10:07	61.58	8/9/05 18:37	66.68	8/10/05 3:07	71.26
8/9/05 10:17	61.58	8/9/05 18:47	66.90	8/10/05 3:17	71.43
8/9/05 10:27	61.91	8/9/05 18:57	67.27	8/10/05 3:27	71.47
8/9/05 10:37	62.07	8/9/05 19:07	67.23	8/10/05 3:37	71.61
8/9/05 10:47	61.79	8/9/05 19:17	67.54	8/10/05 3:47	71.65
8/9/05 10:57	61.83	8/9/05 19:27	67.35	8/10/05 3:57	71.67
8/9/05 11:07	61.93	8/9/05 19:37	67.62	8/10/05 4:07	71.83
8/9/05 11:17	62.36	8/9/05 19:47	67.66	8/10/05 4:17	71.85
8/9/05 11:27	62.48	8/9/05 19:57	67.72	8/10/05 4:27	72.06
8/9/05 11:37	62.48	8/9/05 20:07	67.66	8/10/05 4:37	72.04
8/9/05 11:47	62.40	8/9/05 20:17	67.70	8/10/05 4:47	72.06
8/9/05 11:57	62.28	8/9/05 20:27	67.78	8/10/05 4:57	72.14
8/9/05 12:07	62.71	8/9/05 20:37	68.01	8/10/05 5:07	72.16
8/9/05 12:17	63.01	8/9/05 20:47	68.01	8/10/05 5:17	72.33
8/9/05 12:27	62.99	8/9/05 20:57	68.11	8/10/05 5:27	72.53
8/9/05 12:37	63.18	8/9/05 21:07	68.31	8/10/05 5:37	72.59
8/9/05 12:47	63.30	8/9/05 21:17	68.21	8/10/05 5:47	72.51
8/9/05 12:57	63.46	8/9/05 21:27	68.44	8/10/05 5:57	72.57
8/9/05 13:07	63.42	8/9/05 21:37	68.23	8/10/05 6:07	72.65
8/9/05 13:17	63.55	8/9/05 21:47	68.60	8/10/05 6:17	72.96
8/9/05 13:27	63.42	8/9/05 21:57	68.74	8/10/05 6:27	72.78
8/9/05 13:37	63.63	8/9/05 22:07	68.85	8/10/05 6:37	72.98
8/9/05 13:47	63.71	8/9/05 22:17	68.74	8/10/05 6:47	73.21
8/9/05 13:57	63.59	8/9/05 22:27	69.05	8/10/05 6:57	73.17

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/10/05 7:07	73.35	8/10/05 15:37	78.02	8/11/05 0:07	80.52
8/10/05 7:17	73.39	8/10/05 15:47	78.10	8/11/05 0:17	80.65
8/10/05 7:27	73.54	8/10/05 15:57	78.21	8/11/05 0:27	80.71
8/10/05 7:37	73.62	8/10/05 16:07	78.31	8/11/05 0:37	80.63
8/10/05 7:47	73.74	8/10/05 16:17	78.27	8/11/05 0:47	80.91
8/10/05 7:57	73.82	8/10/05 16:27	78.61	8/11/05 0:57	80.83
8/10/05 8:07	74.13	8/10/05 16:37	78.45	8/11/05 1:07	80.97
8/10/05 8:17	73.96	8/10/05 16:47	78.51	8/11/05 1:17	80.93
8/10/05 8:27	74.17	8/10/05 16:57	78.70	8/11/05 1:27	81.08
8/10/05 8:37	74.27	8/10/05 17:07	78.90	8/11/05 1:37	81.26
8/10/05 8:47	74.31	8/10/05 17:17	78.82	8/11/05 1:47	81.24
8/10/05 8:57	74.31	8/10/05 17:27	79.03	8/11/05 1:57	81.40
8/10/05 9:07	74.39	8/10/05 17:37	78.96	8/11/05 2:07	81.40
8/10/05 9:17	74.54	8/10/05 17:47	79.05	8/11/05 2:17	81.42
8/10/05 9:27	74.68	8/10/05 17:57	79.13	8/11/05 2:27	81.55
8/10/05 9:37	74.70	8/10/05 18:07	78.88	8/11/05 2:37	81.42
8/10/05 9:47	74.76	8/10/05 18:17	78.64	8/11/05 2:47	81.79
8/10/05 9:57	74.84	8/10/05 18:27	78.70	8/11/05 2:57	81.69
8/10/05 10:07	75.01	8/10/05 18:37	78.84	8/11/05 3:07	81.77
8/10/05 10:17	75.15	8/10/05 18:47	78.70	8/11/05 3:17	81.87
8/10/05 10:27	75.15	8/10/05 18:57	78.78	8/11/05 3:27	81.75
8/10/05 10:37	75.15	8/10/05 19:07	78.78	8/11/05 3:37	81.94
8/10/05 10:47	75.36	8/10/05 19:17	79.01	8/11/05 3:47	82.02
8/10/05 10:57	75.52	8/10/05 19:27	78.84	8/11/05 3:57	81.90
8/10/05 11:07	75.72	8/10/05 19:37	78.58	8/11/05 4:07	82.12
8/10/05 11:17	75.68	8/10/05 19:47	78.93	8/11/05 4:17	82.33
8/10/05 11:27	75.77	8/10/05 19:57	79.13	8/11/05 4:27	82.41
8/10/05 11:37	75.95	8/10/05 20:07	79.17	8/11/05 4:37	82.53
8/10/05 11:47	75.93	8/10/05 20:17	79.05	8/11/05 4:47	82.39
8/10/05 11:57	76.14	8/10/05 20:27	79.11	8/11/05 4:57	82.47
8/10/05 12:07	76.22	8/10/05 20:37	79.01	8/11/05 5:07	82.47
8/10/05 12:17	76.30	8/10/05 20:47	79.29	8/11/05 5:17	82.53
8/10/05 12:27	76.30	8/10/05 20:57	79.29	8/11/05 5:27	82.73
8/10/05 12:37	76.48	8/10/05 21:07	79.50	8/11/05 5:37	82.75
8/10/05 12:47	76.44	8/10/05 21:17	79.46	8/11/05 5:47	82.86
8/10/05 12:57	76.53	8/10/05 21:27	79.48	8/11/05 5:57	82.92
8/10/05 13:07	76.48	8/10/05 21:37	79.58	8/11/05 6:07	83.04
8/10/05 13:17	76.75	8/10/05 21:47	79.71	8/11/05 6:17	82.90
8/10/05 13:27	76.93	8/10/05 21:57	79.72	8/11/05 6:27	83.10
8/10/05 13:37	77.06	8/10/05 22:07	79.68	8/11/05 6:37	83.25
8/10/05 13:47	77.06	8/10/05 22:17	79.79	8/11/05 6:47	83.16
8/10/05 13:57	77.00	8/10/05 22:27	79.79	8/11/05 6:57	83.23
8/10/05 14:07	77.26	8/10/05 22:37	79.91	8/11/05 7:07	83.27
8/10/05 14:17	77.41	8/10/05 22:47	80.03	8/11/05 7:17	83.35
8/10/05 14:27	77.61	8/10/05 22:57	80.20	8/11/05 7:27	83.45
8/10/05 14:37	77.55	8/10/05 23:07	80.19	8/11/05 7:37	83.45
8/10/05 14:47	77.71	8/10/05 23:17	80.36	8/11/05 7:47	84.33
8/10/05 14:57	77.65	8/10/05 23:27	80.30	8/11/05 7:57	84.23
8/10/05 15:07	77.86	8/10/05 23:37	80.40	8/11/05 8:07	84.33
8/10/05 15:17	77.73	8/10/05 23:47	80.42	8/11/05 8:17	84.45
8/10/05 15:27	77.90	8/10/05 23:57	80.40	8/11/05 8:27	84.29

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/11/05 8:37	84.43	8/11/05 17:07	88.20	8/12/05 1:37	91.46
8/11/05 8:47	84.45	8/11/05 17:17	88.04	8/12/05 1:47	91.62
8/11/05 8:57	84.68	8/11/05 17:27	88.04	8/12/05 1:57	91.52
8/11/05 9:07	84.74	8/11/05 17:37	88.06	8/12/05 2:07	91.64
8/11/05 9:17	84.80	8/11/05 17:47	88.26	8/12/05 2:17	91.80
8/11/05 9:27	84.96	8/11/05 17:57	88.41	8/12/05 2:27	91.74
8/11/05 9:37	85.07	8/11/05 18:07	88.43	8/12/05 2:37	91.91
8/11/05 9:47	85.05	8/11/05 18:17	88.59	8/12/05 2:47	91.95
8/11/05 9:57	85.17	8/11/05 18:27	88.34	8/12/05 2:57	92.03
8/11/05 10:07	85.25	8/11/05 18:37	88.49	8/12/05 3:07	92.19
8/11/05 10:17	85.11	8/11/05 18:47	88.73	8/12/05 3:17	92.23
8/11/05 10:27	85.29	8/11/05 18:57	88.69	8/12/05 3:27	92.27
8/11/05 10:37	85.29	8/11/05 19:07	88.65	8/12/05 3:37	92.40
8/11/05 10:47	85.54	8/11/05 19:17	88.61	8/12/05 3:47	92.42
8/11/05 10:57	85.60	8/11/05 19:27	88.94	8/12/05 3:57	92.46
8/11/05 11:07	85.72	8/11/05 19:37	88.90	8/12/05 4:07	92.50
8/11/05 11:17	85.68	8/11/05 19:47	89.23	8/12/05 4:17	92.56
8/11/05 11:27	86.01	8/11/05 19:57	89.02	8/12/05 4:27	92.60
8/11/05 11:37	86.05	8/11/05 20:07	89.10	8/12/05 4:37	92.77
8/11/05 11:47	85.78	8/11/05 20:17	89.21	8/12/05 4:47	92.83
8/11/05 11:57	86.60	8/11/05 20:27	89.25	8/12/05 4:57	92.87
8/11/05 12:07	86.15	8/11/05 20:37	89.31	8/12/05 5:07	93.03
8/11/05 12:17	86.15	8/11/05 20:47	89.39	8/12/05 5:17	93.15
8/11/05 12:27	86.23	8/11/05 20:57	89.82	8/12/05 5:27	93.11
8/11/05 12:37	86.48	8/11/05 21:07	89.61	8/12/05 5:37	93.20
8/11/05 12:47	77.26	8/11/05 21:17	89.86	8/12/05 5:47	93.40
8/11/05 12:57	86.52	8/11/05 21:27	89.63	8/12/05 5:57	93.46
8/11/05 13:07	86.34	8/11/05 21:37	90.04	8/12/05 6:07	93.36
8/11/05 13:17	86.40	8/11/05 21:47	90.41	8/12/05 6:17	93.65
8/11/05 13:27	87.20	8/11/05 21:57	90.06	8/12/05 6:27	93.65
8/11/05 13:37	86.54	8/11/05 22:07	89.94	8/12/05 6:37	93.81
8/11/05 13:47	87.38	8/11/05 22:17	90.11	8/12/05 6:47	93.81
8/11/05 13:57	86.60	8/11/05 22:27	90.19	8/12/05 6:57	93.71
8/11/05 14:07	87.09	8/11/05 22:37	90.11	8/12/05 7:07	93.97
8/11/05 14:17	87.05	8/11/05 22:47	90.21	8/12/05 7:17	94.03
8/11/05 14:27	86.97	8/11/05 22:57	90.23	8/12/05 7:27	94.20
8/11/05 14:37	87.26	8/11/05 23:07	90.56	8/12/05 7:37	94.20
8/11/05 14:47	87.22	8/11/05 23:17	90.29	8/12/05 7:47	94.34
8/11/05 14:57	87.40	8/11/05 23:27	90.54	8/12/05 7:57	94.46
8/11/05 15:07	87.36	8/11/05 23:37	90.51	8/12/05 8:07	94.53
8/11/05 15:17	87.53	8/11/05 23:47	90.66	8/12/05 8:17	94.63
8/11/05 15:27	87.73	8/11/05 23:57	90.70	8/12/05 8:27	93.71
8/11/05 15:37	87.71	8/12/05 0:07	90.76	8/12/05 8:37	93.67
8/11/05 15:47	87.85	8/12/05 0:17	91.03	8/12/05 8:47	93.55
8/11/05 15:57	88.00	8/12/05 0:27	90.92	8/12/05 8:57	93.73
8/11/05 16:07	88.14	8/12/05 0:37	90.97	8/12/05 9:07	93.12
8/11/05 16:17	88.00	8/12/05 0:47	90.97	8/12/05 9:17	89.73
8/11/05 16:27	88.26	8/12/05 0:57	91.21	8/12/05 9:27	88.64
8/11/05 16:37	87.83	8/12/05 1:07	91.27	8/12/05 9:37	88.60
8/11/05 16:47	87.69	8/12/05 1:17	91.23	8/12/05 9:47	88.48
8/11/05 16:57	88.00	8/12/05 1:27	91.35	8/12/05 9:57	88.11

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/12/05 10:07	88.13	8/12/05 18:37	88.25	8/13/05 3:07	88.94
8/12/05 10:17	88.09	8/12/05 18:47	88.23	8/13/05 3:17	88.94
8/12/05 10:27	88.01	8/12/05 18:57	88.19	8/13/05 3:27	89.03
8/12/05 10:37	88.03	8/12/05 19:07	88.33	8/13/05 3:37	89.13
8/12/05 10:47	87.82	8/12/05 19:17	88.41	8/13/05 3:47	89.19
8/12/05 10:57	87.84	8/12/05 19:27	88.27	8/13/05 3:57	88.94
8/12/05 11:07	87.78	8/12/05 19:37	88.29	8/13/05 4:07	89.05
8/12/05 11:17	87.58	8/12/05 19:47	88.17	8/13/05 4:17	89.17
8/12/05 11:27	87.88	8/12/05 19:57	88.23	8/13/05 4:27	89.17
8/12/05 11:37	87.72	8/12/05 20:07	88.41	8/13/05 4:37	89.31
8/12/05 11:47	87.78	8/12/05 20:17	88.41	8/13/05 4:47	89.15
8/12/05 11:57	87.84	8/12/05 20:27	88.52	8/13/05 4:57	89.25
8/12/05 12:07	87.68	8/12/05 20:37	88.37	8/13/05 5:07	89.29
8/12/05 12:17	87.76	8/12/05 20:47	88.29	8/13/05 5:17	89.23
8/12/05 12:27	87.76	8/12/05 20:57	88.46	8/13/05 5:27	89.17
8/12/05 12:37	87.82	8/12/05 21:07	88.41	8/13/05 5:37	89.21
8/12/05 12:47	87.94	8/12/05 21:17	88.49	8/13/05 5:47	89.27
8/12/05 12:57	88.03	8/12/05 21:27	88.39	8/13/05 5:57	89.37
8/12/05 13:07	87.84	8/12/05 21:37	88.47	8/13/05 6:07	89.44
8/12/05 13:17	87.82	8/12/05 21:47	88.58	8/13/05 6:17	89.35
8/12/05 13:27	87.72	8/12/05 21:57	88.60	8/13/05 6:27	89.37
8/12/05 13:37	87.88	8/12/05 22:07	88.51	8/13/05 6:37	89.27
8/12/05 13:47	87.86	8/12/05 22:17	88.60	8/13/05 6:47	89.52
8/12/05 13:57	87.92	8/12/05 22:27	88.62	8/13/05 6:57	89.44
8/12/05 14:07	87.88	8/12/05 22:37	88.66	8/13/05 7:07	89.56
8/12/05 14:17	87.86	8/12/05 22:47	88.51	8/13/05 7:17	89.58
8/12/05 14:27	87.76	8/12/05 22:57	88.72	8/13/05 7:27	89.60
8/12/05 14:37	87.78	8/12/05 23:07	88.64	8/13/05 7:37	89.52
8/12/05 14:47	87.88	8/12/05 23:17	88.60	8/13/05 7:47	89.66
8/12/05 14:57	87.86	8/12/05 23:27	88.62	8/13/05 7:57	89.50
8/12/05 15:07	87.86	8/12/05 23:37	88.68	8/13/05 8:07	89.58
8/12/05 15:17	88.09	8/12/05 23:47	88.72	8/13/05 8:17	89.60
8/12/05 15:27	88.05	8/12/05 23:57	88.76	8/13/05 8:27	89.68
8/12/05 15:37	87.88	8/13/05 0:07	88.64	8/13/05 8:37	89.76
8/12/05 15:47	87.86	8/13/05 0:17	88.78	8/13/05 8:47	89.78
8/12/05 15:57	88.17	8/13/05 0:27	88.76	8/13/05 8:57	89.64
8/12/05 16:07	87.96	8/13/05 0:37	88.96	8/13/05 9:07	89.70
8/12/05 16:17	87.98	8/13/05 0:47	88.78	8/13/05 9:17	89.76
8/12/05 16:27	87.94	8/13/05 0:57	88.84	8/13/05 9:27	89.89
8/12/05 16:37	88.05	8/13/05 1:07	88.82	8/13/05 9:37	89.89
8/12/05 16:47	88.09	8/13/05 1:17	88.78	8/13/05 9:47	89.84
8/12/05 16:57	87.94	8/13/05 1:27	88.82	8/13/05 9:57	89.91
8/12/05 17:07	88.03	8/13/05 1:37	88.80	8/13/05 10:07	89.87
8/12/05 17:17	88.15	8/13/05 1:47	88.94	8/13/05 10:17	89.89
8/12/05 17:27	88.05	8/13/05 1:57	88.82	8/13/05 10:27	86.94
8/12/05 17:37	88.09	8/13/05 2:07	88.82	8/13/05 10:37	86.32
8/12/05 17:47	87.96	8/13/05 2:17	88.86	8/13/05 10:47	90.16
8/12/05 17:57	88.13	8/13/05 2:27	88.90	8/13/05 10:57	89.44
8/12/05 18:07	88.13	8/13/05 2:37	89.01	8/13/05 11:07	89.54
8/12/05 18:17	88.25	8/13/05 2:47	88.84	8/13/05 11:17	89.60
8/12/05 18:27	88.21	8/13/05 2:57	89.05	8/13/05 11:27	89.81

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/13/05 11:37	89.87	8/13/05 20:07	91.12	8/14/05 4:37	91.87
8/13/05 11:47	89.80	8/13/05 20:17	91.12	8/14/05 4:47	92.00
8/13/05 11:57	89.83	8/13/05 20:27	91.01	8/14/05 4:57	92.04
8/13/05 12:07	89.97	8/13/05 20:37	91.03	8/14/05 5:07	91.91
8/13/05 12:17	89.97	8/13/05 20:47	91.20	8/14/05 5:17	92.14
8/13/05 12:27	90.03	8/13/05 20:57	91.05	8/14/05 5:27	92.00
8/13/05 12:37	89.99	8/13/05 21:07	90.97	8/14/05 5:37	92.28
8/13/05 12:47	90.07	8/13/05 21:17	91.07	8/14/05 5:47	92.16
8/13/05 12:57	90.03	8/13/05 21:27	91.03	8/14/05 5:57	92.08
8/13/05 13:07	90.19	8/13/05 21:37	91.18	8/14/05 6:07	92.06
8/13/05 13:17	90.17	8/13/05 21:47	91.16	8/14/05 6:17	92.18
8/13/05 13:27	90.17	8/13/05 21:57	91.10	8/14/05 6:27	92.20
8/13/05 13:37	90.32	8/13/05 22:07	91.16	8/14/05 6:37	92.30
8/13/05 13:47	90.19	8/13/05 22:17	91.26	8/14/05 6:47	92.04
8/13/05 13:57	90.32	8/13/05 22:27	91.16	8/14/05 6:57	92.22
8/13/05 14:07	90.32	8/13/05 22:37	91.18	8/14/05 7:07	92.36
8/13/05 14:17	90.36	8/13/05 22:47	91.30	8/14/05 7:17	92.16
8/13/05 14:27	90.46	8/13/05 22:57	91.12	8/14/05 7:27	92.18
8/13/05 14:37	90.30	8/13/05 23:07	91.22	8/14/05 7:37	92.32
8/13/05 14:47	90.40	8/13/05 23:17	91.32	8/14/05 7:47	92.26
8/13/05 14:57	90.40	8/13/05 23:27	91.46	8/14/05 7:57	92.30
8/13/05 15:07	90.44	8/13/05 23:37	91.32	8/14/05 8:07	92.59
8/13/05 15:17	90.34	8/13/05 23:47	91.26	8/14/05 8:17	92.75
8/13/05 15:27	90.50	8/13/05 23:57	91.34	8/14/05 8:27	92.69
8/13/05 15:37	90.62	8/14/05 0:07	91.40	8/14/05 8:37	92.71
8/13/05 15:47	90.48	8/14/05 0:17	91.30	8/14/05 8:47	92.85
8/13/05 15:57	90.56	8/14/05 0:27	91.38	8/14/05 8:57	92.79
8/13/05 16:07	90.67	8/14/05 0:37	91.34	8/14/05 9:07	92.85
8/13/05 16:17	90.52	8/14/05 0:47	91.42	8/14/05 9:17	92.85
8/13/05 16:27	90.69	8/14/05 0:57	91.44	8/14/05 9:27	92.83
8/13/05 16:37	90.67	8/14/05 1:07	91.61	8/14/05 9:37	93.08
8/13/05 16:47	90.85	8/14/05 1:17	91.44	8/14/05 9:47	93.20
8/13/05 16:57	90.70	8/14/05 1:27	91.48	8/14/05 9:57	93.04
8/13/05 17:07	90.79	8/14/05 1:37	91.57	8/14/05 10:07	93.16
8/13/05 17:17	90.89	8/14/05 1:47	91.59	8/14/05 10:17	93.16
8/13/05 17:27	90.97	8/14/05 1:57	91.61	8/14/05 10:27	93.30
8/13/05 17:37	90.81	8/14/05 2:07	91.65	8/14/05 10:37	93.24
8/13/05 17:47	90.85	8/14/05 2:17	91.69	8/14/05 10:47	93.28
8/13/05 17:57	90.85	8/14/05 2:27	91.77	8/14/05 10:57	93.36
8/13/05 18:07	90.91	8/14/05 2:37	91.75	8/14/05 11:07	93.53
8/13/05 18:17	90.81	8/14/05 2:47	91.52	8/14/05 11:17	93.47
8/13/05 18:27	90.97	8/14/05 2:57	91.71	8/14/05 11:27	93.26
8/13/05 18:37	90.93	8/14/05 3:07	91.77	8/14/05 11:37	93.43
8/13/05 18:47	91.03	8/14/05 3:17	91.73	8/14/05 11:47	93.43
8/13/05 18:57	91.22	8/14/05 3:27	91.85	8/14/05 11:57	93.57
8/13/05 19:07	91.07	8/14/05 3:37	91.83	8/14/05 12:07	93.61
8/13/05 19:17	91.20	8/14/05 3:47	91.87	8/14/05 12:17	93.61
8/13/05 19:27	91.03	8/14/05 3:57	91.95	8/14/05 12:27	93.69
8/13/05 19:37	91.14	8/14/05 4:07	91.85	8/14/05 12:37	93.61
8/13/05 19:47	91.16	8/14/05 4:17	91.73	8/14/05 12:47	93.75
8/13/05 19:57	91.14	8/14/05 4:27	91.93	8/14/05 12:57	93.71

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/14/05 13:07	93.73	8/14/05 21:37	94.49	8/15/05 6:07	95.87
8/14/05 13:17	93.92	8/14/05 21:47	94.45	8/15/05 6:17	95.87
8/14/05 13:27	93.79	8/14/05 21:57	94.68	8/15/05 6:27	96.01
8/14/05 13:37	93.75	8/14/05 22:07	94.68	8/15/05 6:37	95.95
8/14/05 13:47	93.86	8/14/05 22:17	94.72	8/15/05 6:47	95.95
8/14/05 13:57	94.00	8/14/05 22:27	94.76	8/15/05 6:57	96.03
8/14/05 14:07	93.90	8/14/05 22:37	94.76	8/15/05 7:07	95.99
8/14/05 14:17	93.90	8/14/05 22:47	94.86	8/15/05 7:17	95.99
8/14/05 14:27	93.71	8/14/05 22:57	94.78	8/15/05 7:27	96.17
8/14/05 14:37	93.94	8/14/05 23:07	94.96	8/15/05 7:37	96.09
8/14/05 14:47	93.79	8/14/05 23:17	94.86	8/15/05 7:47	96.15
8/14/05 14:57	93.88	8/14/05 23:27	94.78	8/15/05 7:57	96.13
8/14/05 15:07	94.00	8/14/05 23:37	94.88	8/15/05 8:07	96.05
8/14/05 15:17	93.79	8/14/05 23:47	94.92	8/15/05 8:17	96.13
8/14/05 15:27	93.90	8/14/05 23:57	94.80	8/15/05 8:27	92.88
8/14/05 15:37	93.92	8/15/05 0:07	95.09	8/15/05 8:37	96.19
8/14/05 15:47	93.92	8/15/05 0:17	94.94	8/15/05 8:47	96.22
8/14/05 15:57	94.10	8/15/05 0:27	95.17	8/15/05 8:57	96.15
8/14/05 16:07	94.02	8/15/05 0:37	95.03	8/15/05 9:07	96.09
8/14/05 16:17	94.18	8/15/05 0:47	95.15	8/15/05 9:17	96.64
8/14/05 16:27	94.02	8/15/05 0:57	94.90	8/15/05 9:27	96.66
8/14/05 16:37	94.12	8/15/05 1:07	95.03	8/15/05 9:37	96.64
8/14/05 16:47	94.22	8/15/05 1:17	95.01	8/15/05 9:47	96.72
8/14/05 16:57	94.16	8/15/05 1:27	95.05	8/15/05 9:57	96.95
8/14/05 17:07	94.26	8/15/05 1:37	95.11	8/15/05 10:07	96.84
8/14/05 17:17	94.20	8/15/05 1:47	95.19	8/15/05 10:17	97.13
8/14/05 17:27	94.43	8/15/05 1:57	95.17	8/15/05 10:27	96.84
8/14/05 17:37	94.26	8/15/05 2:07	95.19	8/15/05 10:37	96.99
8/14/05 17:47	94.33	8/15/05 2:17	95.37	8/15/05 10:47	97.07
8/14/05 17:57	94.24	8/15/05 2:27	95.37	8/15/05 10:57	97.19
8/14/05 18:07	94.35	8/15/05 2:37	95.25	8/15/05 11:07	97.15
8/14/05 18:17	94.24	8/15/05 2:47	95.31	8/15/05 11:17	97.21
8/14/05 18:27	94.41	8/15/05 2:57	95.42	8/15/05 11:27	97.29
8/14/05 18:37	94.59	8/15/05 3:07	95.31	8/15/05 11:37	97.31
8/14/05 18:47	94.41	8/15/05 3:17	95.50	8/15/05 11:47	97.27
8/14/05 18:57	94.55	8/15/05 3:27	95.35	8/15/05 11:57	97.25
8/14/05 19:07	94.47	8/15/05 3:37	95.38	8/15/05 12:07	97.19
8/14/05 19:17	94.45	8/15/05 3:47	95.48	8/15/05 12:17	97.25
8/14/05 19:27	94.49	8/15/05 3:57	95.50	8/15/05 12:27	97.46
8/14/05 19:37	94.45	8/15/05 4:07	95.42	8/15/05 12:37	97.40
8/14/05 19:47	94.47	8/15/05 4:17	95.50	8/15/05 12:47	97.42
8/14/05 19:57	94.80	8/15/05 4:27	95.72	8/15/05 12:57	97.48
8/14/05 20:07	93.04	8/15/05 4:37	95.46	8/15/05 13:07	97.50
8/14/05 20:17	94.66	8/15/05 4:47	95.58	8/15/05 13:17	97.44
8/14/05 20:27	94.37	8/15/05 4:57	95.64	8/15/05 13:27	97.54
8/14/05 20:37	91.39	8/15/05 5:07	95.70	8/15/05 13:37	97.52
8/14/05 20:47	94.45	8/15/05 5:17	95.72	8/15/05 13:47	97.66
8/14/05 20:57	94.37	8/15/05 5:27	95.76	8/15/05 13:57	97.60
8/14/05 21:07	94.41	8/15/05 5:37	95.66	8/15/05 14:07	97.66
8/14/05 21:17	94.66	8/15/05 5:47	95.74	8/15/05 14:17	97.62
8/14/05 21:27	94.49	8/15/05 5:57	95.93	8/15/05 14:27	97.70

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/15/05 14:37	97.81	8/15/05 23:07	98.63	8/16/05 7:37	99.69
8/15/05 14:47	97.83	8/15/05 23:17	98.57	8/16/05 7:47	100.00
8/15/05 14:57	97.85	8/15/05 23:27	98.59	8/16/05 7:57	99.73
8/15/05 15:07	98.03	8/15/05 23:37	98.71	8/16/05 8:07	100.04
8/15/05 15:17	97.78	8/15/05 23:47	98.75	8/16/05 8:17	99.96
8/15/05 15:27	97.87	8/15/05 23:57	98.65	8/16/05 8:27	99.98
8/15/05 15:37	97.91	8/16/05 0:07	98.57	8/16/05 8:37	100.06
8/15/05 15:47	97.83	8/16/05 0:17	98.77	8/16/05 8:47	100.10
8/15/05 15:57	98.07	8/16/05 0:27	98.65	8/16/05 8:57	99.94
8/15/05 16:07	98.01	8/16/05 0:37	98.73	8/16/05 9:07	99.96
8/15/05 16:17	98.26	8/16/05 0:47	98.73	8/16/05 9:17	100.18
8/15/05 16:27	97.97	8/16/05 0:57	98.85	8/16/05 9:27	100.06
8/15/05 16:37	98.18	8/16/05 1:07	98.83	8/16/05 9:37	100.10
8/15/05 16:47	98.01	8/16/05 1:17	98.73	8/16/05 9:47	100.21
8/15/05 16:57	98.26	8/16/05 1:27	98.96	8/16/05 9:57	100.21
8/15/05 17:07	98.09	8/16/05 1:37	98.83	8/16/05 10:07	100.26
8/15/05 17:17	98.26	8/16/05 1:47	98.98	8/16/05 10:17	100.27
8/15/05 17:27	98.38	8/16/05 1:57	98.90	8/16/05 10:27	100.39
8/15/05 17:37	98.30	8/16/05 2:07	98.81	8/16/05 10:37	100.37
8/15/05 17:47	98.28	8/16/05 2:17	98.88	8/16/05 10:47	100.39
8/15/05 17:57	98.36	8/16/05 2:27	99.12	8/16/05 10:57	100.35
8/15/05 18:07	98.38	8/16/05 2:37	99.04	8/16/05 11:07	100.57
8/15/05 18:17	98.46	8/16/05 2:47	98.96	8/16/05 11:17	100.41
8/15/05 18:27	98.48	8/16/05 2:57	99.02	8/16/05 11:27	100.47
8/15/05 18:37	98.48	8/16/05 3:07	99.10	8/16/05 11:37	100.33
8/15/05 18:47	98.52	8/16/05 3:17	99.37	8/16/05 11:47	100.37
8/15/05 18:57	98.69	8/16/05 3:27	99.28	8/16/05 11:57	100.59
8/15/05 19:07	98.54	8/16/05 3:37	99.24	8/16/05 12:07	100.61
8/15/05 19:17	98.63	8/16/05 3:47	99.14	8/16/05 12:17	100.51
8/15/05 19:27	98.67	8/16/05 3:57	99.12	8/16/05 12:27	100.80
8/15/05 19:37	98.69	8/16/05 4:07	99.10	8/16/05 12:37	100.66
8/15/05 19:47	98.32	8/16/05 4:17	99.22	8/16/05 12:47	100.74
8/15/05 19:57	98.18	8/16/05 4:27	99.14	8/16/05 12:57	100.57
8/15/05 20:07	98.32	8/16/05 4:37	99.27	8/16/05 13:07	100.70
8/15/05 20:17	98.34	8/16/05 4:47	99.18	8/16/05 13:17	100.72
8/15/05 20:27	98.30	8/16/05 4:57	99.20	8/16/05 13:27	100.78
8/15/05 20:37	98.18	8/16/05 5:07	99.28	8/16/05 13:37	100.88
8/15/05 20:47	98.26	8/16/05 5:17	99.37	8/16/05 13:47	100.82
8/15/05 20:57	98.43	8/16/05 5:27	99.45	8/16/05 13:57	101.02
8/15/05 21:07	98.34	8/16/05 5:37	99.45	8/16/05 14:07	100.92
8/15/05 21:17	98.24	8/16/05 5:47	99.45	8/16/05 14:17	100.84
8/15/05 21:27	98.40	8/16/05 5:57	99.51	8/16/05 14:27	101.00
8/15/05 21:37	98.38	8/16/05 6:07	99.47	8/16/05 14:37	100.96
8/15/05 21:47	98.47	8/16/05 6:17	99.39	8/16/05 14:47	101.00
8/15/05 21:57	98.34	8/16/05 6:27	99.45	8/16/05 14:57	101.04
8/15/05 22:07	98.38	8/16/05 6:37	99.51	8/16/05 15:07	100.98
8/15/05 22:17	98.51	8/16/05 6:47	99.59	8/16/05 15:17	100.94
8/15/05 22:27	98.34	8/16/05 6:57	99.59	8/16/05 15:27	101.17
8/15/05 22:37	98.34	8/16/05 7:07	99.49	8/16/05 15:37	101.15
8/15/05 22:47	98.53	8/16/05 7:17	99.67	8/16/05 15:47	101.00
8/15/05 22:57	98.30	8/16/05 7:27	99.61	8/16/05 15:57	101.13

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/16/05 16:07	101.02	8/17/05 0:37	102.13	8/17/05 9:07	103.32
8/16/05 16:17	101.23	8/17/05 0:47	102.27	8/17/05 9:17	103.23
8/16/05 16:27	101.29	8/17/05 0:57	102.09	8/17/05 9:27	103.46
8/16/05 16:37	101.33	8/17/05 1:07	102.29	8/17/05 9:37	103.44
8/16/05 16:47	101.27	8/17/05 1:17	102.32	8/17/05 9:47	103.36
8/16/05 16:57	101.27	8/17/05 1:27	102.17	8/17/05 9:57	103.42
8/16/05 17:07	101.41	8/17/05 1:37	102.32	8/17/05 10:07	103.60
8/16/05 17:17	101.31	8/17/05 1:47	102.19	8/17/05 10:17	103.56
8/16/05 17:27	101.43	8/17/05 1:57	102.25	8/17/05 10:27	103.54
8/16/05 17:37	101.27	8/17/05 2:07	102.19	8/17/05 10:37	103.48
8/16/05 17:47	101.29	8/17/05 2:17	102.48	8/17/05 10:47	103.58
8/16/05 17:57	101.37	8/17/05 2:27	102.34	8/17/05 10:57	103.60
8/16/05 18:07	101.33	8/17/05 2:37	102.32	8/17/05 11:07	105.23
8/16/05 18:17	101.62	8/17/05 2:47	102.50	8/17/05 11:17	109.43
8/16/05 18:27	101.60	8/17/05 2:57	102.50	8/17/05 11:27	109.96
8/16/05 18:37	101.49	8/17/05 3:07	102.48	8/17/05 11:37	110.25
8/16/05 18:47	101.56	8/17/05 3:17	102.48	8/17/05 11:47	110.47
8/16/05 18:57	101.41	8/17/05 3:27	102.50	8/17/05 11:57	110.86
8/16/05 19:07	101.35	8/17/05 3:37	102.54	8/17/05 12:07	111.01
8/16/05 19:17	101.41	8/17/05 3:47	102.42	8/17/05 12:17	111.03
8/16/05 19:27	101.50	8/17/05 3:57	102.60	8/17/05 12:27	111.43
8/16/05 19:37	101.60	8/17/05 4:07	102.58	8/17/05 12:37	111.54
8/16/05 19:47	101.37	8/17/05 4:17	102.58	8/17/05 12:47	111.64
8/16/05 19:57	101.56	8/17/05 4:27	102.56	8/17/05 12:57	111.82
8/16/05 20:07	101.70	8/17/05 4:37	102.62	8/17/05 13:07	112.07
8/16/05 20:17	101.60	8/17/05 4:47	102.60	8/17/05 13:17	112.09
8/16/05 20:27	101.58	8/17/05 4:57	102.75	8/17/05 13:27	112.27
8/16/05 20:37	101.50	8/17/05 5:07	102.73	8/17/05 13:37	112.50
8/16/05 20:47	101.58	8/17/05 5:17	102.62	8/17/05 13:47	112.50
8/16/05 20:57	101.64	8/17/05 5:27	102.79	8/17/05 13:57	112.56
8/16/05 21:07	101.60	8/17/05 5:37	102.72	8/17/05 14:07	112.64
8/16/05 21:17	101.62	8/17/05 5:47	102.72	8/17/05 14:17	112.81
8/16/05 21:27	101.76	8/17/05 5:57	102.81	8/17/05 14:27	113.17
8/16/05 21:37	101.89	8/17/05 6:07	102.70	8/17/05 14:37	113.09
8/16/05 21:47	101.76	8/17/05 6:17	102.79	8/17/05 14:47	113.15
8/16/05 21:57	101.68	8/17/05 6:27	102.79	8/17/05 14:57	113.34
8/16/05 22:07	101.95	8/17/05 6:37	102.87	8/17/05 15:07	113.46
8/16/05 22:17	101.80	8/17/05 6:47	102.89	8/17/05 15:17	113.59
8/16/05 22:27	101.86	8/17/05 6:57	102.95	8/17/05 15:27	113.77
8/16/05 22:37	101.72	8/17/05 7:07	103.05	8/17/05 15:37	113.95
8/16/05 22:47	102.07	8/17/05 7:17	103.19	8/17/05 15:47	113.89
8/16/05 22:57	101.76	8/17/05 7:27	102.95	8/17/05 15:57	114.08
8/16/05 23:07	101.80	8/17/05 7:37	103.05	8/17/05 16:07	114.22
8/16/05 23:17	101.91	8/17/05 7:47	103.03	8/17/05 16:17	114.16
8/16/05 23:27	101.89	8/17/05 7:57	103.01	8/17/05 16:27	114.24
8/16/05 23:37	102.07	8/17/05 8:07	99.71	8/17/05 16:37	114.38
8/16/05 23:47	101.97	8/17/05 8:17	104.28	8/17/05 16:47	114.53
8/16/05 23:57	102.09	8/17/05 8:27	102.59	8/17/05 16:57	114.81
8/17/05 0:07	102.23	8/17/05 8:37	102.61	8/17/05 17:07	114.67
8/17/05 0:17	102.19	8/17/05 8:47	102.89	8/17/05 17:17	114.83
8/17/05 0:27	102.09	8/17/05 8:57	103.42	8/17/05 17:27	115.08

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/17/05 17:37	115.18	8/18/05 2:07	119.79	8/18/05 10:37	124.27
8/17/05 17:47	115.04	8/18/05 2:17	119.93	8/18/05 10:47	124.40
8/17/05 17:57	115.08	8/18/05 2:27	119.91	8/18/05 10:57	124.54
8/17/05 18:07	115.16	8/18/05 2:37	120.14	8/18/05 11:07	124.54
8/17/05 18:17	115.39	8/18/05 2:47	120.32	8/18/05 11:17	124.74
8/17/05 18:27	115.43	8/18/05 2:57	120.36	8/18/05 11:27	124.74
8/17/05 18:37	115.33	8/18/05 3:07	120.42	8/18/05 11:37	124.99
8/17/05 18:47	115.67	8/18/05 3:17	120.55	8/18/05 11:47	124.99
8/17/05 18:57	115.65	8/18/05 3:27	120.73	8/18/05 11:57	125.17
8/17/05 19:07	115.71	8/18/05 3:37	120.77	8/18/05 12:07	125.32
8/17/05 19:17	116.00	8/18/05 3:47	120.77	8/18/05 12:17	125.30
8/17/05 19:27	116.06	8/18/05 3:57	121.00	8/18/05 12:27	125.48
8/17/05 19:37	116.02	8/18/05 4:07	120.96	8/18/05 12:37	125.56
8/17/05 19:47	116.21	8/18/05 4:17	121.04	8/18/05 12:47	125.63
8/17/05 19:57	116.29	8/18/05 4:27	121.20	8/18/05 12:57	125.87
8/17/05 20:07	116.55	8/18/05 4:37	121.33	8/18/05 13:07	125.91
8/17/05 20:17	116.49	8/18/05 4:47	121.37	8/18/05 13:17	126.06
8/17/05 20:27	116.49	8/18/05 4:57	121.43	8/18/05 13:27	126.12
8/17/05 20:37	116.76	8/18/05 5:07	121.57	8/18/05 13:37	126.28
8/17/05 20:47	116.68	8/18/05 5:17	121.63	8/18/05 13:47	126.30
8/17/05 20:57	116.86	8/18/05 5:27	121.84	8/18/05 13:57	126.28
8/17/05 21:07	117.03	8/18/05 5:37	121.84	8/18/05 14:07	126.46
8/17/05 21:17	117.11	8/18/05 5:47	122.00	8/18/05 14:17	126.55
8/17/05 21:27	117.17	8/18/05 5:57	122.04	8/18/05 14:27	126.59
8/17/05 21:37	117.23	8/18/05 6:07	122.10	8/18/05 14:37	126.71
8/17/05 21:47	117.21	8/18/05 6:17	122.25	8/18/05 14:47	126.94
8/17/05 21:57	117.46	8/18/05 6:27	122.39	8/18/05 14:57	126.81
8/17/05 22:07	117.52	8/18/05 6:37	122.29	8/18/05 15:07	127.04
8/17/05 22:17	117.58	8/18/05 6:47	122.55	8/18/05 15:17	127.14
8/17/05 22:27	117.54	8/18/05 6:57	122.60	8/18/05 15:27	127.24
8/17/05 22:37	117.78	8/18/05 7:07	122.68	8/18/05 15:37	127.22
8/17/05 22:47	117.93	8/18/05 7:17	122.76	8/18/05 15:47	127.28
8/17/05 22:57	117.86	8/18/05 7:27	122.90	8/18/05 15:57	127.43
8/17/05 23:07	118.03	8/18/05 7:37	122.86	8/18/05 16:07	127.47
8/17/05 23:17	118.07	8/18/05 7:47	123.15	8/18/05 16:17	127.61
8/17/05 23:27	118.23	8/18/05 7:57	123.09	8/18/05 16:27	127.79
8/17/05 23:37	118.26	8/18/05 8:07	123.05	8/18/05 16:37	127.86
8/17/05 23:47	118.40	8/18/05 8:17	114.00	8/18/05 16:47	128.06
8/17/05 23:57	118.42	8/18/05 8:27	112.90	8/18/05 16:57	128.04
8/18/05 0:07	118.56	8/18/05 8:37	122.56	8/18/05 17:07	128.04
8/18/05 0:17	118.71	8/18/05 8:47	122.52	8/18/05 17:17	128.25
8/18/05 0:27	118.73	8/18/05 8:57	122.78	8/18/05 17:27	128.29
8/18/05 0:37	118.85	8/18/05 9:07	122.88	8/18/05 17:37	128.27
8/18/05 0:47	119.07	8/18/05 9:17	123.31	8/18/05 17:47	128.49
8/18/05 0:57	119.03	8/18/05 9:27	123.35	8/18/05 17:57	128.27
8/18/05 1:07	118.95	8/18/05 9:37	123.54	8/18/05 18:07	128.31
8/18/05 1:17	119.14	8/18/05 9:47	123.68	8/18/05 18:17	128.53
8/18/05 1:27	119.40	8/18/05 9:57	123.78	8/18/05 18:27	128.64
8/18/05 1:37	119.48	8/18/05 10:07	123.86	8/18/05 18:37	128.53
8/18/05 1:47	119.63	8/18/05 10:17	124.15	8/18/05 18:47	128.82
8/18/05 1:57	119.67	8/18/05 10:27	124.07	8/18/05 18:57	128.88

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/18/05 19:07	128.82	8/19/05 3:37	132.79	8/19/05 12:07	136.68
8/18/05 19:17	129.00	8/19/05 3:47	132.89	8/19/05 12:17	136.87
8/18/05 19:27	129.07	8/19/05 3:57	132.89	8/19/05 12:27	137.03
8/18/05 19:37	129.23	8/19/05 4:07	132.96	8/19/05 12:37	137.09
8/18/05 19:47	129.13	8/19/05 4:17	133.02	8/19/05 12:47	137.05
8/18/05 19:57	129.25	8/19/05 4:27	133.22	8/19/05 12:57	137.17
8/18/05 20:07	129.31	8/19/05 4:37	133.22	8/19/05 13:07	137.23
8/18/05 20:17	129.64	8/19/05 4:47	133.30	8/19/05 13:17	137.27
8/18/05 20:27	129.52	8/19/05 4:57	133.51	8/19/05 13:27	137.42
8/18/05 20:37	129.66	8/19/05 5:07	133.39	8/19/05 13:37	137.32
8/18/05 20:47	129.84	8/19/05 5:17	133.57	8/19/05 13:47	137.48
8/18/05 20:57	129.82	8/19/05 5:27	133.65	8/19/05 13:57	137.48
8/18/05 21:07	129.92	8/19/05 5:37	133.67	8/19/05 14:07	137.81
8/18/05 21:17	129.92	8/19/05 5:47	133.77	8/19/05 14:17	137.69
8/18/05 21:27	130.03	8/19/05 5:57	133.86	8/19/05 14:27	137.89
8/18/05 21:37	130.11	8/19/05 6:07	133.86	8/19/05 14:37	137.75
8/18/05 21:47	130.05	8/19/05 6:17	133.96	8/19/05 14:47	138.07
8/18/05 21:57	130.07	8/19/05 6:27	134.00	8/19/05 14:57	138.14
8/18/05 22:07	130.30	8/19/05 6:37	134.27	8/19/05 15:07	138.10
8/18/05 22:17	130.50	8/19/05 6:47	134.12	8/19/05 15:17	138.18
8/18/05 22:27	130.40	8/19/05 6:57	134.24	8/19/05 15:27	138.22
8/18/05 22:37	130.54	8/19/05 7:07	134.37	8/19/05 15:37	138.36
8/18/05 22:47	130.60	8/19/05 7:17	134.47	8/19/05 15:47	138.34
8/18/05 22:57	130.75	8/19/05 7:27	134.55	8/19/05 15:57	138.50
8/18/05 23:07	130.72	8/19/05 7:37	134.49	8/19/05 16:07	138.69
8/18/05 23:17	130.85	8/19/05 7:47	134.67	8/19/05 16:17	138.67
8/18/05 23:27	130.91	8/19/05 7:57	135.00	8/19/05 16:27	138.63
8/18/05 23:37	130.78	8/19/05 8:07	134.94	8/19/05 16:37	138.87
8/18/05 23:47	130.99	8/19/05 8:17	135.14	8/19/05 16:47	138.81
8/18/05 23:57	131.11	8/19/05 8:27	135.12	8/19/05 16:57	139.00
8/19/05 0:07	131.11	8/19/05 8:37	135.00	8/19/05 17:07	138.98
8/19/05 0:17	131.44	8/19/05 8:47	135.29	8/19/05 17:17	139.04
8/19/05 0:27	131.32	8/19/05 8:57	135.47	8/19/05 17:27	139.20
8/19/05 0:37	131.38	8/19/05 9:07	135.43	8/19/05 17:37	139.24
8/19/05 0:47	131.52	8/19/05 9:17	135.57	8/19/05 17:47	139.40
8/19/05 0:57	131.65	8/19/05 9:27	135.60	8/19/05 17:57	139.34
8/19/05 1:07	131.75	8/19/05 9:37	135.64	8/19/05 18:07	139.24
8/19/05 1:17	131.73	8/19/05 9:47	135.78	8/19/05 18:17	139.32
8/19/05 1:27	131.87	8/19/05 9:57	135.90	8/19/05 18:27	139.37
8/19/05 1:37	131.75	8/19/05 10:07	135.84	8/19/05 18:37	139.45
8/19/05 1:47	132.10	8/19/05 10:17	135.92	8/19/05 18:47	139.57
8/19/05 1:57	132.01	8/19/05 10:27	136.05	8/19/05 18:57	139.67
8/19/05 2:07	132.06	8/19/05 10:37	136.07	8/19/05 19:07	139.57
8/19/05 2:17	132.16	8/19/05 10:47	136.21	8/19/05 19:17	139.65
8/19/05 2:27	132.28	8/19/05 10:57	136.21	8/19/05 19:27	139.82
8/19/05 2:37	132.44	8/19/05 11:07	136.48	8/19/05 19:37	139.69
8/19/05 2:47	132.44	8/19/05 11:17	136.37	8/19/05 19:47	139.82
8/19/05 2:57	132.51	8/19/05 11:27	136.50	8/19/05 19:57	139.86
8/19/05 3:07	132.55	8/19/05 11:37	136.62	8/19/05 20:07	140.04
8/19/05 3:17	132.71	8/19/05 11:47	136.60	8/19/05 20:17	139.90
8/19/05 3:27	132.69	8/19/05 11:57	136.74	8/19/05 20:27	140.06

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/19/05 20:37	140.16	8/20/05 5:07	143.99	8/20/05 13:37	148.49
8/19/05 20:47	140.39	8/20/05 5:17	143.93	8/20/05 13:47	148.45
8/19/05 20:57	140.41	8/20/05 5:27	143.99	8/20/05 13:57	148.66
8/19/05 21:07	140.37	8/20/05 5:37	144.24	8/20/05 14:07	148.76
8/19/05 21:17	140.43	8/20/05 5:47	144.30	8/20/05 14:17	148.96
8/19/05 21:27	140.57	8/20/05 5:57	144.28	8/20/05 14:27	148.96
8/19/05 21:37	140.59	8/20/05 6:07	144.42	8/20/05 14:37	149.21
8/19/05 21:47	140.66	8/20/05 6:17	144.48	8/20/05 14:47	149.11
8/19/05 21:57	140.66	8/20/05 6:27	144.52	8/20/05 14:57	149.19
8/19/05 22:07	140.78	8/20/05 6:37	144.57	8/20/05 15:07	149.35
8/19/05 22:17	141.00	8/20/05 6:47	144.63	8/20/05 15:17	149.33
8/19/05 22:27	140.96	8/20/05 6:57	144.77	8/20/05 15:27	149.46
8/19/05 22:37	141.13	8/20/05 7:07	144.79	8/20/05 15:37	149.56
8/19/05 22:47	141.19	8/20/05 7:17	145.47	8/20/05 15:47	149.60
8/19/05 22:57	141.21	8/20/05 7:27	145.44	8/20/05 15:57	149.62
8/19/05 23:07	141.33	8/20/05 7:37	145.50	8/20/05 16:07	149.68
8/19/05 23:17	141.41	8/20/05 7:47	145.40	8/20/05 16:17	149.80
8/19/05 23:27	141.29	8/20/05 7:57	145.53	8/20/05 16:27	149.78
8/19/05 23:37	141.47	8/20/05 8:07	136.23	8/20/05 16:37	149.89
8/19/05 23:47	141.66	8/20/05 8:17	134.94	8/20/05 16:47	150.11
8/19/05 23:57	141.66	8/20/05 8:27	139.29	8/20/05 16:57	149.95
8/20/05 0:07	141.76	8/20/05 8:37	143.45	8/20/05 17:07	150.27
8/20/05 0:17	141.80	8/20/05 8:47	143.86	8/20/05 17:17	150.27
8/20/05 0:27	141.76	8/20/05 8:57	144.22	8/20/05 17:27	150.56
8/20/05 0:37	141.88	8/20/05 9:07	144.32	8/20/05 17:37	150.29
8/20/05 0:47	141.88	8/20/05 9:17	144.50	8/20/05 17:47	150.38
8/20/05 0:57	142.07	8/20/05 9:27	144.85	8/20/05 17:57	150.13
8/20/05 1:07	142.13	8/20/05 9:37	144.97	8/20/05 18:07	149.87
8/20/05 1:17	142.07	8/20/05 9:47	145.12	8/20/05 18:17	150.11
8/20/05 1:27	142.27	8/20/05 9:57	145.32	8/20/05 18:27	150.11
8/20/05 1:37	142.60	8/20/05 10:07	145.45	8/20/05 18:37	150.17
8/20/05 1:47	142.35	8/20/05 10:17	145.55	8/20/05 18:47	150.17
8/20/05 1:57	142.54	8/20/05 10:27	145.75	8/20/05 18:57	150.26
8/20/05 2:07	142.68	8/20/05 10:37	145.79	8/20/05 19:07	150.32
8/20/05 2:17	142.62	8/20/05 10:47	145.94	8/20/05 19:17	150.30
8/20/05 2:27	142.66	8/20/05 10:57	146.00	8/20/05 19:27	150.48
8/20/05 2:37	142.78	8/20/05 11:07	146.18	8/20/05 19:37	150.48
8/20/05 2:47	142.91	8/20/05 11:17	146.22	8/20/05 19:47	150.56
8/20/05 2:57	142.86	8/20/05 11:27	146.28	8/20/05 19:57	150.52
8/20/05 3:07	142.95	8/20/05 11:37	146.51	8/20/05 20:07	150.83
8/20/05 3:17	143.11	8/20/05 11:47	146.67	8/20/05 20:17	150.97
8/20/05 3:27	143.34	8/20/05 11:57	147.43	8/20/05 20:27	150.79
8/20/05 3:37	143.30	8/20/05 12:07	147.86	8/20/05 20:37	150.97
8/20/05 3:47	143.52	8/20/05 12:17	147.57	8/20/05 20:47	150.99
8/20/05 3:57	143.40	8/20/05 12:27	147.76	8/20/05 20:57	151.07
8/20/05 4:07	143.54	8/20/05 12:37	147.84	8/20/05 21:07	151.16
8/20/05 4:17	143.69	8/20/05 12:47	147.96	8/20/05 21:17	151.30
8/20/05 4:27	143.56	8/20/05 12:57	148.16	8/20/05 21:27	151.20
8/20/05 4:37	143.73	8/20/05 13:07	148.08	8/20/05 21:37	151.40
8/20/05 4:47	143.75	8/20/05 13:17	148.31	8/20/05 21:47	151.42
8/20/05 4:57	143.83	8/20/05 13:27	148.41	8/20/05 21:57	151.57

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/20/05 22:07	151.59	8/21/05 6:37	155.74	8/21/05 15:07	165.50
8/20/05 22:17	151.59	8/21/05 6:47	155.87	8/21/05 15:17	167.90
8/20/05 22:27	151.83	8/21/05 6:57	155.97	8/21/05 15:27	169.27
8/20/05 22:37	151.75	8/21/05 7:07	156.23	8/21/05 15:37	171.28
8/20/05 22:47	151.77	8/21/05 7:17	156.07	8/21/05 15:47	174.22
8/20/05 22:57	151.91	8/21/05 7:27	156.13	8/21/05 15:57	175.12
8/20/05 23:07	152.02	8/21/05 7:37	156.34	8/21/05 16:07	175.80
8/20/05 23:17	152.14	8/21/05 7:47	156.32	8/21/05 16:17	177.13
8/20/05 23:27	152.32	8/21/05 7:57	156.36	8/21/05 16:27	178.07
8/20/05 23:37	152.18	8/21/05 8:07	156.54	8/21/05 16:37	179.34
8/20/05 23:47	152.38	8/21/05 8:17	156.60	8/21/05 16:47	180.89
8/20/05 23:57	152.59	8/21/05 8:27	156.97	8/21/05 16:57	182.29
8/21/05 0:07	152.47	8/21/05 8:37	157.56	8/21/05 17:07	183.51
8/21/05 0:17	152.45	8/21/05 8:47	157.13	8/21/05 17:17	184.62
8/21/05 0:27	152.47	8/21/05 8:57	157.32	8/21/05 17:27	186.40
8/21/05 0:37	152.65	8/21/05 9:07	153.58	8/21/05 17:37	188.40
8/21/05 0:47	152.77	8/21/05 9:17	157.40	8/21/05 17:47	190.53
8/21/05 0:57	152.71	8/21/05 9:27	157.44	8/21/05 17:57	191.78
8/21/05 1:07	152.96	8/21/05 9:37	157.58	8/21/05 18:07	193.31
8/21/05 1:17	153.00	8/21/05 9:47	157.61	8/21/05 18:17	193.86
8/21/05 1:27	153.02	8/21/05 9:57	157.79	8/21/05 18:27	194.52
8/21/05 1:37	153.00	8/21/05 10:07	158.01	8/21/05 18:37	195.22
8/21/05 1:47	153.00	8/21/05 10:17	158.14	8/21/05 18:47	196.06
8/21/05 1:57	153.27	8/21/05 10:27	158.08	8/21/05 18:57	196.98
8/21/05 2:07	153.41	8/21/05 10:37	158.30	8/21/05 19:07	198.88
8/21/05 2:17	153.49	8/21/05 10:47	158.28	8/21/05 19:17	182.04
8/21/05 2:27	153.63	8/21/05 10:57	158.55	8/21/05 19:27	182.45
8/21/05 2:37	153.47	8/21/05 11:07	158.42	8/21/05 19:37	183.52
8/21/05 2:47	153.59	8/21/05 11:17	158.71	8/21/05 19:47	196.91
8/21/05 2:57	153.84	8/21/05 11:27	158.79	8/21/05 19:57	202.68
8/21/05 3:07	153.98	8/21/05 11:37	159.06	8/21/05 20:07	204.99
8/21/05 3:17	154.19	8/21/05 11:47	159.02	8/21/05 20:17	207.45
8/21/05 3:27	154.21	8/21/05 11:57	159.16	8/21/05 20:27	209.60
8/21/05 3:37	154.35	8/21/05 12:07	159.28	8/21/05 20:37	210.11
8/21/05 3:47	154.35	8/21/05 12:17	159.35	8/21/05 20:47	210.83
8/21/05 3:57	154.51	8/21/05 12:27	159.41	8/21/05 20:57	211.83
8/21/05 4:07	154.49	8/21/05 12:37	159.57	8/21/05 21:07	212.85
8/21/05 4:17	154.60	8/21/05 12:47	159.71	8/21/05 21:17	213.84
8/21/05 4:27	154.94	8/21/05 12:57	159.82	8/21/05 21:27	215.23
8/21/05 4:37	154.76	8/21/05 13:07	159.96	8/21/05 21:37	214.41
8/21/05 4:47	154.92	8/21/05 13:17	160.04	8/21/05 21:47	215.82
8/21/05 4:57	155.05	8/21/05 13:27	160.04	8/21/05 21:57	215.94
8/21/05 5:07	155.25	8/21/05 13:37	160.22	8/21/05 22:07	216.62
8/21/05 5:17	155.11	8/21/05 13:47	160.31	8/21/05 22:17	218.01
8/21/05 5:27	155.19	8/21/05 13:57	160.45	8/21/05 22:27	218.30
8/21/05 5:37	155.33	8/21/05 14:07	160.51	8/21/05 22:37	218.77
8/21/05 5:47	155.31	8/21/05 14:17	160.64	8/21/05 22:47	218.26
8/21/05 5:57	155.48	8/21/05 14:27	160.72	8/21/05 22:57	219.16
8/21/05 6:07	155.54	8/21/05 14:37	161.35	8/21/05 23:07	219.98
8/21/05 6:17	155.58	8/21/05 14:47	162.01	8/21/05 23:17	220.59
8/21/05 6:27	155.68	8/21/05 14:57	163.48	8/21/05 23:27	220.88

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/21/05 23:37	222.14	8/22/05 8:07	234.98	8/22/05 15:34	158.23
8/21/05 23:47	222.98	8/22/05 8:17	235.40	8/22/05 15:34	158.27
8/21/05 23:57	222.78	8/22/05 8:27	236.10	8/22/05 15:34	158.27
8/22/05 0:07	224.44	8/22/05 8:37	192.14	8/22/05 15:34	158.13
8/22/05 0:17	223.86	8/22/05 8:47	199.77	8/22/05 15:34	149.46
8/22/05 0:27	223.84	8/22/05 8:57	200.38	8/22/05 15:34	156.23
8/22/05 0:37	225.38	8/22/05 9:07	201.88	8/22/05 15:34	156.58
8/22/05 0:47	226.40	8/22/05 9:17	202.73	8/22/05 15:34	156.66
8/22/05 0:57	225.15	8/22/05 9:27	204.90	8/22/05 15:34	156.51
8/22/05 1:07	225.68	8/22/05 9:37	206.44	8/22/05 15:34	156.98
8/22/05 1:17	227.14	8/22/05 9:47	206.74	8/22/05 15:34	156.55
8/22/05 1:27	227.79	8/22/05 9:57	206.74	8/22/05 15:34	156.64
8/22/05 1:37	226.93	8/22/05 10:07	208.46	8/22/05 15:34	156.45
8/22/05 1:47	226.34	8/22/05 10:17	209.08	8/22/05 15:34	156.70
8/22/05 1:57	226.65	8/22/05 10:27	209.71	8/22/05 15:34	156.51
8/22/05 2:07	227.22	8/22/05 10:37	209.73	8/22/05 15:34	156.74
8/22/05 2:17	227.18	8/22/05 10:47	210.82	8/22/05 15:34	156.68
8/22/05 2:27	228.36	8/22/05 10:57	211.72	8/22/05 15:34	156.74
8/22/05 2:37	227.75	8/22/05 11:07	212.35	8/22/05 15:34	156.64
8/22/05 2:47	227.40	8/22/05 11:17	213.01	8/22/05 15:34	156.49
8/22/05 2:57	228.12	8/22/05 11:27	211.64	8/22/05 15:34	156.64
8/22/05 3:07	227.08	8/22/05 11:37	191.96	8/22/05 15:34	156.60
8/22/05 3:17	228.94	8/22/05 11:47	196.93	8/22/05 15:34	156.58
8/22/05 3:27	230.27	8/22/05 11:57	199.77	8/22/05 15:34	156.68
8/22/05 3:37	229.84	8/22/05 12:07	200.65	8/22/05 15:34	156.70
8/22/05 3:47	229.47	8/22/05 12:17	201.10	8/22/05 15:34	156.61
8/22/05 3:57	230.64	8/22/05 12:27	201.53	8/22/05 15:34	156.63
8/22/05 4:07	230.58	8/22/05 12:37	202.14	8/22/05 15:34	156.63
8/22/05 4:17	231.76	8/22/05 12:47	202.61	8/22/05 15:34	156.66
8/22/05 4:27	231.62	8/22/05 12:57	203.94	8/22/05 15:34	156.61
8/22/05 4:37	232.05	8/22/05 13:07	175.31	8/22/05 15:34	156.63
8/22/05 4:47	232.58	8/22/05 13:17	159.24	8/22/05 15:34	156.66
8/22/05 4:57	232.38	8/22/05 13:27	158.60	8/22/05 15:34	156.61
8/22/05 5:07	232.97	8/22/05 13:37	158.66	8/22/05 15:34	156.61
8/22/05 5:17	233.77	8/22/05 13:47	158.25	8/22/05 15:34	156.59
8/22/05 5:27	233.87	8/22/05 13:57	158.35	8/22/05 15:34	156.59
8/22/05 5:37	234.01	8/22/05 14:07	158.45	8/22/05 15:34	156.57
8/22/05 5:47	235.59	8/22/05 14:17	158.13	8/22/05 15:34	156.55
8/22/05 5:57	235.08	8/22/05 14:27	158.64	8/22/05 15:34	156.55
8/22/05 6:07	234.05	8/22/05 14:37	158.41	8/22/05 15:34	156.53
8/22/05 6:17	235.02	8/22/05 14:47	158.25	8/22/05 15:34	156.51
8/22/05 6:27	234.57	8/22/05 14:57	158.23	8/22/05 15:34	156.49
8/22/05 6:37	235.38	8/22/05 15:07	158.25	8/22/05 15:34	156.49
8/22/05 6:47	235.41	8/22/05 15:17	158.25	8/22/05 15:34	156.45
8/22/05 6:57	235.53	8/22/05 15:27	158.12	8/22/05 15:34	156.43
8/22/05 7:07	236.06	8/22/05 15:34	158.12	8/22/05 15:34	156.41
8/22/05 7:17	236.43	8/22/05 15:34	158.17	8/22/05 15:34	156.39
8/22/05 7:27	153.46	8/22/05 15:34	158.09	8/22/05 15:34	156.35
8/22/05 7:37	223.85	8/22/05 15:34	158.13	8/22/05 15:34	156.33
8/22/05 7:47	233.13	8/22/05 15:34	158.21	8/22/05 15:34	156.29
8/22/05 7:57	235.24	8/22/05 15:34	158.11	8/22/05 15:34	156.25

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/22/05 15:34	156.23	8/22/05 15:49	153.32	8/22/05 20:01	148.54
8/22/05 15:34	156.19	8/22/05 15:50	153.26	8/22/05 20:11	148.42
8/22/05 15:34	156.15	8/22/05 15:51	153.24	8/22/05 20:21	148.32
8/22/05 15:34	156.09	8/22/05 15:52	153.18	8/22/05 20:31	148.19
8/22/05 15:35	156.01	8/22/05 15:53	153.14	8/22/05 20:41	148.09
8/22/05 15:35	155.88	8/22/05 15:55	153.09	8/22/05 20:51	147.96
8/22/05 15:35	155.80	8/22/05 15:56	153.03	8/22/05 21:01	147.86
8/22/05 15:35	155.70	8/22/05 15:57	153.00	8/22/05 21:11	147.76
8/22/05 15:35	155.60	8/22/05 15:59	152.95	8/22/05 21:21	147.65
8/22/05 15:35	155.52	8/22/05 16:00	152.89	8/22/05 21:31	147.55
8/22/05 15:35	155.40	8/22/05 16:02	152.83	8/22/05 21:41	147.45
8/22/05 15:35	155.29	8/22/05 16:03	152.77	8/22/05 21:51	147.34
8/22/05 15:35	155.19	8/22/05 16:05	152.72	8/22/05 22:01	147.26
8/22/05 15:35	155.09	8/22/05 16:07	152.66	8/22/05 22:11	147.16
8/22/05 15:35	154.99	8/22/05 16:09	152.58	8/22/05 22:21	147.06
8/22/05 15:35	154.89	8/22/05 16:11	152.53	8/22/05 22:31	146.97
8/22/05 15:36	154.81	8/22/05 16:13	152.46	8/22/05 22:41	146.85
8/22/05 15:36	154.70	8/22/05 16:16	152.41	8/22/05 22:51	146.77
8/22/05 15:36	154.62	8/22/05 16:18	152.31	8/22/05 23:01	146.66
8/22/05 15:36	154.56	8/22/05 16:21	152.25	8/22/05 23:11	146.56
8/22/05 15:36	154.50	8/22/05 16:24	152.18	8/22/05 23:21	146.48
8/22/05 15:36	154.44	8/22/05 16:27	152.12	8/22/05 23:31	146.38
8/22/05 15:36	154.38	8/22/05 16:30	152.04	8/22/05 23:41	146.27
8/22/05 15:37	154.32	8/22/05 16:33	151.95	8/22/05 23:51	146.19
8/22/05 15:37	154.28	8/22/05 16:37	151.88	8/23/05 0:01	146.11
8/22/05 15:37	154.24	8/22/05 16:40	151.79	8/23/05 0:11	146.01
8/22/05 15:37	154.20	8/22/05 16:44	151.71	8/23/05 0:21	145.92
8/22/05 15:37	154.14	8/22/05 16:48	151.59	8/23/05 0:31	145.84
8/22/05 15:38	154.10	8/22/05 16:53	151.50	8/23/05 0:41	145.74
8/22/05 15:38	154.08	8/22/05 16:58	151.40	8/23/05 0:51	145.66
8/22/05 15:38	154.03	8/22/05 17:03	151.31	8/23/05 1:01	145.58
8/22/05 15:38	154.00	8/22/05 17:08	151.21	8/23/05 1:11	145.49
8/22/05 15:39	153.96	8/22/05 17:13	151.09	8/23/05 1:21	145.39
8/22/05 15:39	153.92	8/22/05 17:19	150.98	8/23/05 1:31	145.31
8/22/05 15:39	153.89	8/22/05 17:26	150.86	8/23/05 1:41	145.23
8/22/05 15:40	153.86	8/22/05 17:32	150.73	8/23/05 1:51	145.14
8/22/05 15:40	153.82	8/22/05 17:39	150.58	8/23/05 2:01	145.06
8/22/05 15:41	153.79	8/22/05 17:47	150.48	8/23/05 2:11	144.98
8/22/05 15:41	153.74	8/22/05 17:55	150.33	8/23/05 2:21	144.88
8/22/05 15:41	153.71	8/22/05 18:03	150.18	8/23/05 2:31	144.80
8/22/05 15:42	153.70	8/22/05 18:12	150.04	8/23/05 2:41	144.73
8/22/05 15:42	153.64	8/22/05 18:21	149.89	8/23/05 2:51	144.65
8/22/05 15:43	153.63	8/22/05 18:31	149.74	8/23/05 3:01	144.55
8/22/05 15:43	153.58	8/22/05 18:41	149.59	8/23/05 3:11	144.49
8/22/05 15:44	153.56	8/22/05 18:51	149.44	8/23/05 3:21	144.41
8/22/05 15:45	153.53	8/22/05 19:01	149.30	8/23/05 3:31	144.32
8/22/05 15:45	153.51	8/22/05 19:11	149.17	8/23/05 3:41	144.24
8/22/05 15:46	153.47	8/22/05 19:21	149.02	8/23/05 3:51	144.16
8/22/05 15:47	153.42	8/22/05 19:31	148.90	8/23/05 4:01	144.10
8/22/05 15:48	153.38	8/22/05 19:41	148.77	8/23/05 4:11	144.02
8/22/05 15:48	153.33	8/22/05 19:51	148.67	8/23/05 4:21	143.93

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/23/05 4:31	143.85	8/23/05 13:01	140.39	8/23/05 21:31	137.50
8/23/05 4:41	143.77	8/23/05 13:11	140.33	8/23/05 21:41	137.44
8/23/05 4:51	143.71	8/23/05 13:21	140.27	8/23/05 21:51	137.38
8/23/05 5:01	143.63	8/23/05 13:31	140.20	8/23/05 22:01	137.34
8/23/05 5:11	143.57	8/23/05 13:41	140.14	8/23/05 22:11	137.30
8/23/05 5:21	143.48	8/23/05 13:51	140.08	8/23/05 22:21	137.24
8/23/05 5:31	143.40	8/23/05 14:01	140.02	8/23/05 22:31	137.17
8/23/05 5:41	143.34	8/23/05 14:11	139.96	8/23/05 22:41	137.13
8/23/05 5:51	143.28	8/23/05 14:21	139.90	8/23/05 22:51	137.07
8/23/05 6:01	143.22	8/23/05 14:31	139.83	8/23/05 23:01	137.03
8/23/05 6:11	143.13	8/23/05 14:41	139.79	8/23/05 23:11	136.97
8/23/05 6:21	143.05	8/23/05 14:51	139.73	8/23/05 23:21	136.91
8/23/05 6:31	142.99	8/23/05 15:01	139.67	8/23/05 23:31	136.85
8/23/05 6:41	142.93	8/23/05 15:11	139.61	8/23/05 23:41	136.78
8/23/05 6:51	142.85	8/23/05 15:21	139.55	8/23/05 23:51	136.74
8/23/05 7:01	142.79	8/23/05 15:31	139.49	8/24/05 0:01	136.68
8/23/05 7:11	142.70	8/23/05 15:41	139.42	8/24/05 0:11	136.64
8/23/05 7:21	142.64	8/23/05 15:51	139.38	8/24/05 0:21	136.58
8/23/05 7:31	142.56	8/23/05 16:01	139.32	8/24/05 0:31	136.52
8/23/05 7:41	142.50	8/23/05 16:11	139.26	8/24/05 0:41	136.48
8/23/05 7:51	142.44	8/23/05 16:21	139.20	8/24/05 0:51	136.42
8/23/05 8:01	142.36	8/23/05 16:31	139.14	8/24/05 1:01	136.38
8/23/05 8:11	142.27	8/23/05 16:41	139.08	8/24/05 1:11	136.31
8/23/05 8:21	142.21	8/23/05 16:51	139.04	8/24/05 1:21	136.25
8/23/05 8:31	142.13	8/23/05 17:01	138.97	8/24/05 1:31	136.21
8/23/05 8:41	142.07	8/23/05 17:11	138.91	8/24/05 1:41	136.15
8/23/05 8:51	142.01	8/23/05 17:21	138.85	8/24/05 1:51	136.11
8/23/05 9:01	141.92	8/23/05 17:31	138.81	8/24/05 2:01	136.05
8/23/05 9:11	141.87	8/23/05 17:41	138.75	8/24/05 2:11	135.99
8/23/05 9:21	141.78	8/23/05 17:51	138.69	8/24/05 2:21	135.95
8/23/05 9:31	141.72	8/23/05 18:01	138.63	8/24/05 2:31	135.88
8/23/05 9:41	141.66	8/23/05 18:11	138.57	8/24/05 2:41	135.84
8/23/05 9:51	141.60	8/23/05 18:21	138.52	8/24/05 2:51	135.78
8/23/05 10:01	141.54	8/23/05 18:31	138.46	8/24/05 3:01	135.72
8/23/05 10:11	141.45	8/23/05 18:41	138.40	8/24/05 3:11	135.68
8/23/05 10:21	141.39	8/23/05 18:51	138.36	8/24/05 3:21	135.64
8/23/05 10:31	141.33	8/23/05 19:01	138.30	8/24/05 3:31	135.60
8/23/05 10:41	141.27	8/23/05 19:11	138.26	8/24/05 3:41	135.52
8/23/05 10:51	141.21	8/23/05 19:21	138.20	8/24/05 3:51	135.48
8/23/05 11:01	141.13	8/23/05 19:31	138.14	8/24/05 4:01	135.43
8/23/05 11:11	141.07	8/23/05 19:41	138.09	8/24/05 4:11	135.39
8/23/05 11:21	141.00	8/23/05 19:51	138.03	8/24/05 4:21	135.33
8/23/05 11:31	140.94	8/23/05 20:01	137.97	8/24/05 4:31	135.27
8/23/05 11:41	140.88	8/23/05 20:11	137.93	8/24/05 4:41	135.23
8/23/05 11:51	140.82	8/23/05 20:21	137.89	8/24/05 4:51	135.17
8/23/05 12:01	140.76	8/23/05 20:31	137.81	8/24/05 5:01	135.13
8/23/05 12:11	140.69	8/23/05 20:41	137.77	8/24/05 5:11	135.09
8/23/05 12:21	140.63	8/23/05 20:51	137.73	8/24/05 5:21	135.05
8/23/05 12:31	140.57	8/23/05 21:01	137.66	8/24/05 5:31	134.98
8/23/05 12:41	140.51	8/23/05 21:11	137.60	8/24/05 5:41	134.94
8/23/05 12:51	140.47	8/23/05 21:21	137.54	8/24/05 5:51	134.88

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/24/05 6:01	134.84	8/24/05 14:31	132.38	8/24/05 23:01	130.09
8/24/05 6:11	134.78	8/24/05 14:41	132.34	8/24/05 23:11	130.07
8/24/05 6:21	134.74	8/24/05 14:51	132.28	8/24/05 23:21	130.01
8/24/05 6:31	134.68	8/24/05 15:01	132.24	8/24/05 23:31	129.97
8/24/05 6:41	134.64	8/24/05 15:11	132.20	8/24/05 23:41	129.93
8/24/05 6:51	134.60	8/24/05 15:21	132.16	8/24/05 23:51	129.89
8/24/05 7:01	134.53	8/24/05 15:31	132.12	8/25/05 0:01	129.85
8/24/05 7:11	134.49	8/24/05 15:41	132.06	8/25/05 0:11	129.81
8/24/05 7:21	134.45	8/24/05 15:51	132.04	8/25/05 0:21	129.77
8/24/05 7:31	134.41	8/24/05 16:01	131.98	8/25/05 0:31	129.73
8/24/05 7:41	134.35	8/24/05 16:11	131.94	8/25/05 0:41	129.68
8/24/05 7:51	134.31	8/24/05 16:21	131.87	8/25/05 0:51	129.62
8/24/05 8:01	134.25	8/24/05 16:31	131.83	8/25/05 1:01	129.58
8/24/05 8:11	134.21	8/24/05 16:41	131.79	8/25/05 1:11	129.56
8/24/05 8:21	134.15	8/24/05 16:51	131.75	8/25/05 1:21	129.50
8/24/05 8:31	134.10	8/24/05 17:01	131.69	8/25/05 1:31	129.46
8/24/05 8:41	134.06	8/24/05 17:11	131.65	8/25/05 1:41	129.42
8/24/05 8:51	134.00	8/24/05 17:21	131.61	8/25/05 1:51	129.38
8/24/05 9:01	133.96	8/24/05 17:31	131.57	8/25/05 2:01	129.34
8/24/05 9:11	133.92	8/24/05 17:41	131.51	8/25/05 2:11	129.30
8/24/05 9:21	133.86	8/24/05 17:51	131.46	8/25/05 2:21	129.26
8/24/05 9:31	133.82	8/24/05 18:01	131.42	8/25/05 2:31	129.21
8/24/05 9:41	133.76	8/24/05 18:11	131.38	8/25/05 2:41	129.17
8/24/05 9:51	133.72	8/24/05 18:21	131.34	8/25/05 2:51	129.13
8/24/05 10:01	133.68	8/24/05 18:31	131.30	8/25/05 3:01	129.09
8/24/05 10:11	133.61	8/24/05 18:41	131.24	8/25/05 3:11	129.05
8/24/05 10:21	133.57	8/24/05 18:51	131.20	8/25/05 3:21	129.01
8/24/05 10:31	133.51	8/24/05 19:01	131.16	8/25/05 3:31	128.97
8/24/05 10:41	133.47	8/24/05 19:11	131.12	8/25/05 3:41	128.93
8/24/05 10:51	133.41	8/24/05 19:21	131.08	8/25/05 3:51	128.89
8/24/05 11:01	133.39	8/24/05 19:31	131.04	8/25/05 4:01	128.85
8/24/05 11:11	133.33	8/24/05 19:41	130.99	8/25/05 4:11	128.80
8/24/05 11:21	133.28	8/24/05 19:51	130.93	8/25/05 4:21	128.76
8/24/05 11:31	133.25	8/24/05 20:01	130.89	8/25/05 4:31	128.72
8/24/05 11:41	133.18	8/24/05 20:11	130.85	8/25/05 4:41	128.68
8/24/05 11:51	133.14	8/24/05 20:21	130.81	8/25/05 4:51	128.64
8/24/05 12:01	133.08	8/24/05 20:31	130.77	8/25/05 5:01	128.60
8/24/05 12:11	133.04	8/24/05 20:41	130.73	8/25/05 5:11	128.56
8/24/05 12:21	133.00	8/24/05 20:51	130.69	8/25/05 5:21	128.52
8/24/05 12:31	132.94	8/24/05 21:01	130.63	8/25/05 5:31	128.48
8/24/05 12:41	132.90	8/24/05 21:11	130.59	8/25/05 5:41	128.44
8/24/05 12:51	132.85	8/24/05 21:21	130.54	8/25/05 5:51	128.40
8/24/05 13:01	132.79	8/24/05 21:31	130.50	8/25/05 6:01	128.35
8/24/05 13:11	132.75	8/24/05 21:41	130.46	8/25/05 6:11	128.33
8/24/05 13:21	132.71	8/24/05 21:51	130.40	8/25/05 6:21	128.29
8/24/05 13:31	132.67	8/24/05 22:01	130.36	8/25/05 6:31	128.25
8/24/05 13:41	132.61	8/24/05 22:11	130.32	8/25/05 6:41	128.21
8/24/05 13:51	132.57	8/24/05 22:21	130.28	8/25/05 6:51	128.17
8/24/05 14:01	132.51	8/24/05 22:31	130.24	8/25/05 7:01	128.13
8/24/05 14:11	132.47	8/24/05 22:41	130.20	8/25/05 7:11	128.09
8/24/05 14:21	132.43	8/24/05 22:51	130.16	8/25/05 7:21	128.05

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Time	Drawdown	Time	Drawdown	Time	Drawdown
8/25/05 7:31	128.00	8/25/05 16:01	126.10	8/26/05 0:31	124.30
8/25/05 7:41	127.96	8/25/05 16:11	126.08	8/26/05 0:41	124.26
8/25/05 7:51	127.93	8/25/05 16:21	126.04	8/26/05 0:51	124.22
8/25/05 8:01	127.90	8/25/05 16:31	126.00	8/26/05 1:01	124.20
8/25/05 8:11	127.86	8/25/05 16:41	125.96	8/26/05 1:11	124.16
8/25/05 8:21	127.82	8/25/05 16:51	125.92	8/26/05 1:21	124.14
8/25/05 8:31	127.78	8/25/05 17:01	125.90	8/26/05 1:31	124.10
8/25/05 8:41	127.76	8/25/05 17:11	125.86	8/26/05 1:41	124.06
8/25/05 8:51	127.70	8/25/05 17:21	125.82	8/26/05 1:51	124.02
8/25/05 9:01	127.68	8/25/05 17:31	125.78	8/26/05 2:01	124.00
8/25/05 9:11	127.64	8/25/05 17:41	125.74	8/26/05 2:11	123.96
8/25/05 9:21	127.60	8/25/05 17:51	125.72	8/26/05 2:21	123.94
8/25/05 9:31	127.56	8/25/05 18:01	125.67	8/26/05 2:31	123.89
8/25/05 9:41	127.52	8/25/05 18:11	125.63	8/26/05 2:41	123.85
8/25/05 9:51	127.47	8/25/05 18:21	125.59	8/26/05 2:51	123.81
8/25/05 10:01	127.45	8/25/05 18:31	125.57	8/26/05 3:01	123.79
8/25/05 10:11	127.41	8/25/05 18:41	125.53	8/26/05 3:11	123.75
8/25/05 10:21	127.37	8/25/05 18:51	125.49	8/26/05 3:21	123.73
8/25/05 10:31	127.33	8/25/05 19:01	125.45	8/26/05 3:31	123.69
8/25/05 10:41	127.29	8/25/05 19:11	125.43	8/26/05 3:41	123.65
8/25/05 10:51	127.27	8/25/05 19:21	125.39	8/26/05 3:51	123.63
8/25/05 11:01	127.21	8/25/05 19:31	125.37	8/26/05 4:01	123.59
8/25/05 11:11	127.19	8/25/05 19:41	125.31	8/26/05 4:11	123.55
8/25/05 11:21	127.15	8/25/05 19:51	125.27	8/26/05 4:21	123.51
8/25/05 11:31	127.11	8/25/05 20:01	125.24	8/26/05 4:31	123.48
8/25/05 11:41	127.07	8/25/05 20:11	125.20	8/26/05 4:41	123.44
8/25/05 11:51	127.05	8/25/05 20:21	125.16	8/26/05 4:51	123.42
8/25/05 12:01	126.98	8/25/05 20:31	125.14	8/26/05 5:01	123.38
8/25/05 12:11	127.07	8/25/05 20:41	125.10	8/26/05 5:11	123.36
8/25/05 12:21	126.92	8/25/05 20:51	125.08	8/26/05 5:21	123.32
8/25/05 12:31	126.88	8/25/05 21:01	125.04	8/26/05 5:31	123.28
8/25/05 12:41	126.84	8/25/05 21:11	125.00	8/26/05 5:41	123.26
8/25/05 12:51	126.82	8/25/05 21:21	124.98	8/26/05 5:51	123.22
8/25/05 13:01	126.78	8/25/05 21:31	124.94	8/26/05 6:01	123.18
8/25/05 13:11	126.74	8/25/05 21:41	124.90	8/26/05 6:11	123.14
8/25/05 13:21	126.70	8/25/05 21:51	124.86	8/26/05 6:21	123.12
8/25/05 13:31	126.66	8/25/05 22:01	124.84	8/26/05 6:31	123.08
8/25/05 13:41	126.64	8/25/05 22:11	124.77	8/26/05 6:41	123.06
8/25/05 13:51	126.60	8/25/05 22:21	124.75	8/26/05 6:51	123.01
8/25/05 14:01	126.55	8/25/05 22:31	124.74	8/26/05 7:01	122.97
8/25/05 14:11	126.51	8/25/05 22:41	124.69	8/26/05 7:11	122.93
8/25/05 14:21	126.47	8/25/05 22:51	124.65	8/26/05 7:21	122.91
8/25/05 14:31	126.43	8/25/05 23:01	124.61	8/26/05 7:31	122.87
8/25/05 14:41	126.41	8/25/05 23:11	124.57	8/26/05 7:41	122.85
8/25/05 14:51	126.37	8/25/05 23:21	124.55	8/26/05 7:51	122.81
8/25/05 15:01	126.33	8/25/05 23:31	124.51	8/26/05 8:01	122.77
8/25/05 15:11	126.29	8/25/05 23:41	124.49	8/26/05 8:11	122.73
8/25/05 15:21	126.25	8/25/05 23:51	124.45	8/26/05 8:21	122.71
8/25/05 15:31	126.23	8/26/05 0:01	124.41	8/26/05 8:31	122.67
8/25/05 15:41	126.19	8/26/05 0:11	124.36	8/26/05 8:41	122.65
8/25/05 15:51	126.14	8/26/05 0:21	124.34	8/26/05 8:51	122.61

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/26/05 9:01	122.56	8/26/05 17:31	120.85	8/27/05 2:01	119.13
8/26/05 9:11	122.52	8/26/05 17:41	120.80	8/27/05 2:11	119.11
8/26/05 9:21	122.50	8/26/05 17:51	120.78	8/27/05 2:21	119.07
8/26/05 9:31	122.46	8/26/05 18:01	120.74	8/27/05 2:31	119.02
8/26/05 9:41	122.42	8/26/05 18:11	120.70	8/27/05 2:41	118.98
8/26/05 9:51	122.40	8/26/05 18:21	120.66	8/27/05 2:51	118.96
8/26/05 10:01	122.36	8/26/05 18:31	120.64	8/27/05 3:01	118.92
8/26/05 10:11	122.34	8/26/05 18:41	120.60	8/27/05 3:11	118.90
8/26/05 10:21	122.28	8/26/05 18:51	120.58	8/27/05 3:21	118.86
8/26/05 10:31	122.26	8/26/05 19:01	120.54	8/27/05 3:31	118.82
8/26/05 10:41	122.22	8/26/05 19:11	120.52	8/27/05 3:41	118.80
8/26/05 10:51	122.20	8/26/05 19:21	120.46	8/27/05 3:51	118.76
8/26/05 11:01	122.15	8/26/05 19:31	120.44	8/27/05 4:01	118.74
8/26/05 11:11	122.12	8/26/05 19:41	120.41	8/27/05 4:11	118.70
8/26/05 11:21	122.07	8/26/05 19:51	120.37	8/27/05 4:21	118.66
8/26/05 11:31	122.05	8/26/05 20:01	120.33	8/27/05 4:31	118.62
8/26/05 11:41	122.01	8/26/05 20:11	120.31	8/27/05 4:41	118.59
8/26/05 11:51	121.99	8/26/05 20:21	120.27	8/27/05 4:51	118.55
8/26/05 12:01	121.95	8/26/05 20:31	120.25	8/27/05 5:01	118.53
8/26/05 12:11	121.91	8/26/05 20:41	120.21	8/27/05 5:11	118.49
8/26/05 12:21	121.89	8/26/05 20:51	120.19	8/27/05 5:21	118.45
8/26/05 12:31	121.85	8/26/05 21:01	120.15	8/27/05 5:31	118.41
8/26/05 12:41	121.81	8/26/05 21:11	120.11	8/27/05 5:41	118.39
8/26/05 12:51	121.79	8/26/05 21:21	120.07	8/27/05 5:51	118.35
8/26/05 13:01	121.75	8/26/05 21:31	120.05	8/27/05 6:01	118.33
8/26/05 13:11	121.73	8/26/05 21:41	120.01	8/27/05 6:11	118.29
8/26/05 13:21	121.68	8/26/05 21:51	119.99	8/27/05 6:21	118.25
8/26/05 13:31	121.64	8/26/05 22:01	119.95	8/27/05 6:31	118.23
8/26/05 13:41	121.62	8/26/05 22:11	119.90	8/27/05 6:41	118.19
8/26/05 13:51	121.58	8/26/05 22:21	119.86	8/27/05 6:51	118.16
8/26/05 14:01	121.54	8/26/05 22:31	119.84	8/27/05 7:01	118.13
8/26/05 14:11	121.52	8/26/05 22:41	119.80	8/27/05 7:11	118.08
8/26/05 14:21	121.48	8/26/05 22:51	119.76	8/27/05 7:21	118.06
8/26/05 14:31	121.46	8/26/05 23:01	119.74	8/27/05 7:31	118.02
8/26/05 14:41	121.42	8/26/05 23:11	119.72	8/27/05 7:41	118.00
8/26/05 14:51	121.38	8/26/05 23:21	119.68	8/27/05 7:51	117.96
8/26/05 15:01	121.35	8/26/05 23:31	119.64	8/27/05 8:01	117.92
8/26/05 15:11	121.32	8/26/05 23:41	119.62	8/27/05 8:11	117.90
8/26/05 15:21	121.28	8/26/05 23:51	119.58	8/27/05 8:21	117.86
8/26/05 15:31	121.23	8/27/05 0:01	119.54	8/27/05 8:31	117.84
8/26/05 15:41	121.19	8/27/05 0:11	119.52	8/27/05 8:41	117.80
8/26/05 15:51	121.17	8/27/05 0:21	119.47	8/27/05 8:51	117.76
8/26/05 16:01	121.15	8/27/05 0:31	119.45	8/27/05 9:01	117.74
8/26/05 16:11	121.11	8/27/05 0:41	119.41	8/27/05 9:11	117.70
8/26/05 16:21	121.07	8/27/05 0:51	119.37	8/27/05 9:21	117.66
8/26/05 16:31	121.03	8/27/05 1:01	119.35	8/27/05 9:31	117.61
8/26/05 16:41	121.01	8/27/05 1:11	119.31	8/27/05 9:41	117.59
8/26/05 16:51	120.97	8/27/05 1:21	119.27	8/27/05 9:51	117.55
8/26/05 17:01	120.93	8/27/05 1:31	119.23	8/27/05 10:01	117.51
8/26/05 17:11	120.91	8/27/05 1:41	119.21	8/27/05 10:11	117.49
8/26/05 17:21	120.87	8/27/05 1:51	119.17	8/27/05 10:21	117.45

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/27/05 10:31	117.41	8/27/05 19:01	115.69	8/28/05 3:31	114.03
8/27/05 10:41	117.39	8/27/05 19:11	115.65	8/28/05 3:41	113.99
8/27/05 10:51	117.35	8/27/05 19:21	115.63	8/28/05 3:51	113.97
8/27/05 11:01	117.31	8/27/05 19:31	115.59	8/28/05 4:01	113.93
8/27/05 11:11	117.29	8/27/05 19:41	115.57	8/28/05 4:11	113.91
8/27/05 11:21	117.25	8/27/05 19:51	115.53	8/28/05 4:21	113.87
8/27/05 11:31	117.20	8/27/05 20:01	115.50	8/28/05 4:31	113.83
8/27/05 11:41	117.18	8/27/05 20:11	115.46	8/28/05 4:41	113.81
8/27/05 11:51	117.14	8/27/05 20:21	115.42	8/28/05 4:51	113.77
8/27/05 12:01	117.12	8/27/05 20:31	115.40	8/28/05 5:01	113.75
8/27/05 12:11	117.08	8/27/05 20:41	115.36	8/28/05 5:11	113.71
8/27/05 12:21	117.04	8/27/05 20:51	115.34	8/28/05 5:21	113.67
8/27/05 12:31	117.02	8/27/05 21:01	115.30	8/28/05 5:31	113.64
8/27/05 12:41	116.96	8/27/05 21:11	115.28	8/28/05 5:41	113.60
8/27/05 12:51	116.94	8/27/05 21:21	115.24	8/28/05 5:51	113.58
8/27/05 13:01	116.90	8/27/05 21:31	115.20	8/28/05 6:01	113.54
8/27/05 13:11	116.86	8/27/05 21:41	115.18	8/28/05 6:11	113.52
8/27/05 13:21	116.83	8/27/05 21:51	115.14	8/28/05 6:21	113.48
8/27/05 13:31	116.79	8/27/05 22:01	115.10	8/28/05 6:31	113.46
8/27/05 13:41	116.77	8/27/05 22:11	115.08	8/28/05 6:41	113.42
8/27/05 13:51	116.73	8/27/05 22:21	115.04	8/28/05 6:51	113.38
8/27/05 14:01	116.71	8/27/05 22:31	115.02	8/28/05 7:01	113.36
8/27/05 14:11	116.67	8/27/05 22:41	114.98	8/28/05 7:11	113.34
8/27/05 14:21	116.63	8/27/05 22:51	114.95	8/28/05 7:21	113.30
8/27/05 14:31	116.61	8/27/05 23:01	114.91	8/28/05 7:31	113.25
8/27/05 14:41	116.57	8/27/05 23:11	114.89	8/28/05 7:41	113.23
8/27/05 14:51	116.53	8/27/05 23:21	114.85	8/28/05 7:51	113.19
8/27/05 15:01	116.49	8/27/05 23:31	114.83	8/28/05 8:01	113.17
8/27/05 15:11	116.47	8/27/05 23:41	114.79	8/28/05 8:11	113.13
8/27/05 15:21	116.43	8/27/05 23:51	114.75	8/28/05 8:21	113.11
8/27/05 15:31	116.38	8/28/05 0:01	114.73	8/28/05 8:31	113.07
8/27/05 15:41	116.34	8/28/05 0:11	114.69	8/28/05 8:41	113.03
8/27/05 15:51	116.32	8/28/05 0:21	114.65	8/28/05 8:51	113.01
8/27/05 16:01	116.28	8/28/05 0:31	114.63	8/28/05 9:01	112.97
8/27/05 16:11	116.26	8/28/05 0:41	114.58	8/28/05 9:11	112.93
8/27/05 16:21	116.22	8/28/05 0:51	114.54	8/28/05 9:21	112.91
8/27/05 16:31	116.18	8/28/05 1:01	114.52	8/28/05 9:31	112.87
8/27/05 16:41	116.16	8/28/05 1:11	114.48	8/28/05 9:41	112.84
8/27/05 16:51	116.12	8/28/05 1:21	114.46	8/28/05 9:51	112.80
8/27/05 17:01	116.08	8/28/05 1:31	114.42	8/28/05 10:01	112.79
8/27/05 17:11	116.06	8/28/05 1:41	114.38	8/28/05 10:11	112.74
8/27/05 17:21	116.02	8/28/05 1:51	114.36	8/28/05 10:21	112.72
8/27/05 17:31	116.00	8/28/05 2:01	114.34	8/28/05 10:31	112.68
8/27/05 17:41	115.96	8/28/05 2:11	114.30	8/28/05 10:41	112.66
8/27/05 17:51	115.91	8/28/05 2:21	114.26	8/28/05 10:51	112.62
8/27/05 18:01	115.88	8/28/05 2:31	114.24	8/28/05 11:01	112.60
8/27/05 18:11	115.85	8/28/05 2:41	114.20	8/28/05 11:11	112.56
8/27/05 18:21	115.81	8/28/05 2:51	114.16	8/28/05 11:21	112.52
8/27/05 18:31	115.79	8/28/05 3:01	114.13	8/28/05 11:31	112.50
8/27/05 18:41	115.75	8/28/05 3:11	114.10	8/28/05 11:41	112.46
8/27/05 18:51	115.73	8/28/05 3:21	114.05	8/28/05 11:51	112.44

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/28/05 12:01	112.40	8/28/05 20:31	110.78	8/29/05 5:01	109.14
8/28/05 12:11	112.37	8/28/05 20:41	110.74	8/29/05 5:11	109.10
8/28/05 12:21	112.33	8/28/05 20:51	110.72	8/29/05 5:21	109.08
8/28/05 12:31	112.31	8/28/05 21:01	110.68	8/29/05 5:31	109.04
8/28/05 12:41	112.29	8/28/05 21:11	110.66	8/29/05 5:41	109.00
8/28/05 12:51	112.25	8/28/05 21:21	110.62	8/29/05 5:51	108.98
8/28/05 13:01	112.21	8/28/05 21:31	110.60	8/29/05 6:01	108.94
8/28/05 13:11	112.17	8/28/05 21:41	110.56	8/29/05 6:11	108.92
8/28/05 13:21	112.15	8/28/05 21:51	110.51	8/29/05 6:21	108.88
8/28/05 13:31	112.11	8/28/05 22:01	110.47	8/29/05 6:31	108.83
8/28/05 13:41	112.09	8/28/05 22:11	110.45	8/29/05 6:41	108.82
8/28/05 13:51	112.05	8/28/05 22:21	110.43	8/29/05 6:51	108.80
8/28/05 14:01	112.01	8/28/05 22:31	110.39	8/29/05 7:01	108.75
8/28/05 14:11	111.99	8/28/05 22:41	110.37	8/29/05 7:11	108.71
8/28/05 14:21	111.95	8/28/05 22:51	110.33	8/29/05 7:21	108.67
8/28/05 14:31	111.93	8/28/05 23:01	110.31	8/29/05 7:31	108.65
8/28/05 14:41	111.91	8/28/05 23:11	110.27	8/29/05 7:41	108.61
8/28/05 14:51	111.86	8/28/05 23:21	110.23	8/29/05 7:51	108.59
8/28/05 15:01	111.82	8/28/05 23:31	110.21	8/29/05 8:01	108.55
8/28/05 15:11	111.78	8/28/05 23:41	110.16	8/29/05 8:11	108.53
8/28/05 15:21	111.76	8/28/05 23:51	110.15	8/29/05 8:21	108.49
8/28/05 15:31	111.72	8/29/05 0:01	110.11	8/29/05 8:31	108.47
8/28/05 15:41	111.68	8/29/05 0:11	110.08	8/29/05 8:41	108.43
8/28/05 15:51	111.66	8/29/05 0:21	110.04	8/29/05 8:51	108.40
8/28/05 16:01	111.64	8/29/05 0:31	110.00	8/29/05 9:01	108.37
8/28/05 16:11	111.60	8/29/05 0:41	109.98	8/29/05 9:11	108.32
8/28/05 16:21	111.58	8/29/05 0:51	109.96	8/29/05 9:21	108.30
8/28/05 16:31	111.54	8/29/05 1:01	109.92	8/29/05 9:31	108.26
8/28/05 16:41	111.50	8/29/05 1:11	109.88	8/29/05 9:41	108.24
8/28/05 16:51	111.48	8/29/05 1:21	109.86	8/29/05 9:51	108.20
8/28/05 17:01	111.44	8/29/05 1:31	109.84	8/29/05 10:01	108.18
8/28/05 17:11	111.39	8/29/05 1:41	109.80	8/29/05 10:11	108.14
8/28/05 17:21	111.37	8/29/05 1:51	109.76	8/29/05 10:21	108.10
8/28/05 17:31	111.33	8/29/05 2:01	109.71	8/29/05 10:31	108.06
8/28/05 17:41	111.31	8/29/05 2:11	109.70	8/29/05 10:41	108.04
8/28/05 17:51	111.27	8/29/05 2:21	109.68	8/29/05 10:51	108.00
8/28/05 18:01	111.23	8/29/05 2:31	109.63	8/29/05 11:01	107.96
8/28/05 18:11	111.21	8/29/05 2:41	109.59	8/29/05 11:11	107.94
8/28/05 18:21	111.17	8/29/05 2:51	109.57	8/29/05 11:21	107.92
8/28/05 18:31	111.15	8/29/05 3:01	109.53	8/29/05 11:31	107.87
8/28/05 18:41	111.13	8/29/05 3:11	109.49	8/29/05 11:41	107.85
8/28/05 18:51	111.09	8/29/05 3:21	109.47	8/29/05 11:51	107.81
8/28/05 19:01	111.05	8/29/05 3:31	109.43	8/29/05 12:01	107.79
8/28/05 19:11	111.03	8/29/05 3:41	109.41	8/29/05 12:11	107.75
8/28/05 19:21	110.98	8/29/05 3:51	109.37	8/29/05 12:21	107.71
8/28/05 19:31	110.96	8/29/05 4:01	109.35	8/29/05 12:31	107.67
8/28/05 19:41	110.92	8/29/05 4:11	109.31	8/29/05 12:41	107.65
8/28/05 19:51	110.90	8/29/05 4:21	109.27	8/29/05 12:51	107.61
8/28/05 20:01	110.86	8/29/05 4:31	109.25	8/29/05 13:01	107.59
8/28/05 20:11	110.84	8/29/05 4:41	109.20	8/29/05 13:11	107.55
8/28/05 20:21	110.80	8/29/05 4:51	109.18	8/29/05 13:21	107.51

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/29/05 13:31	107.49	8/29/05 22:01	105.93	8/30/05 6:31	104.44
8/29/05 13:41	107.45	8/29/05 22:11	105.89	8/30/05 6:41	104.40
8/29/05 13:51	107.40	8/29/05 22:21	105.87	8/30/05 6:51	104.38
8/29/05 14:01	107.38	8/29/05 22:31	105.83	8/30/05 7:01	104.36
8/29/05 14:11	107.34	8/29/05 22:41	105.81	8/30/05 7:11	104.33
8/29/05 14:21	107.32	8/29/05 22:51	105.77	8/30/05 7:21	104.31
8/29/05 14:31	107.30	8/29/05 23:01	105.75	8/30/05 7:31	104.29
8/29/05 14:41	107.26	8/29/05 23:11	105.73	8/30/05 7:41	104.25
8/29/05 14:51	107.22	8/29/05 23:21	105.69	8/30/05 7:51	104.21
8/29/05 15:01	107.20	8/29/05 23:31	105.66	8/30/05 8:01	104.19
8/29/05 15:11	107.16	8/29/05 23:41	105.64	8/30/05 8:11	104.15
8/29/05 15:21	107.12	8/29/05 23:51	105.60	8/30/05 8:21	104.11
8/29/05 15:31	107.10	8/30/05 0:01	105.58	8/30/05 8:31	104.11
8/29/05 15:41	107.06	8/30/05 0:11	105.54	8/30/05 8:41	104.07
8/29/05 15:51	107.04	8/30/05 0:21	105.50	8/30/05 8:51	104.03
8/29/05 16:01	106.99	8/30/05 0:31	105.50	8/30/05 9:01	104.01
8/29/05 16:11	106.97	8/30/05 0:41	105.48	8/30/05 9:11	103.99
8/29/05 16:21	106.93	8/30/05 0:51	105.44	8/30/05 9:21	103.95
8/29/05 16:31	106.89	8/30/05 1:01	105.40	8/30/05 9:31	103.93
8/29/05 16:41	106.87	8/30/05 1:11	105.38	8/30/05 9:41	103.88
8/29/05 16:51	106.83	8/30/05 1:21	105.34	8/30/05 9:51	103.86
8/29/05 17:01	106.81	8/30/05 1:31	105.32	8/30/05 10:01	103.84
8/29/05 17:11	106.79	8/30/05 1:41	105.29	8/30/05 10:11	103.82
8/29/05 17:21	106.75	8/30/05 1:51	105.26	8/30/05 10:21	103.78
8/29/05 17:31	106.71	8/30/05 2:01	105.21	8/30/05 10:31	103.76
8/29/05 17:41	106.69	8/30/05 2:11	105.19	8/30/05 10:41	103.72
8/29/05 17:51	106.67	8/30/05 2:21	105.15	8/30/05 10:51	103.68
8/29/05 18:01	106.63	8/30/05 2:31	105.13	8/30/05 11:01	103.66
8/29/05 18:11	106.59	8/30/05 2:41	105.11	8/30/05 11:11	103.64
8/29/05 18:21	106.59	8/30/05 2:51	105.07	8/30/05 11:21	103.62
8/29/05 18:31	106.54	8/30/05 3:01	105.05	8/30/05 11:31	103.58
8/29/05 18:41	106.52	8/30/05 3:11	105.03	8/30/05 11:41	103.56
8/29/05 18:51	106.48	8/30/05 3:21	104.97	8/30/05 11:51	103.52
8/29/05 19:01	106.46	8/30/05 3:31	104.97	8/30/05 12:01	103.50
8/29/05 19:11	106.44	8/30/05 3:41	104.93	8/30/05 12:11	103.46
8/29/05 19:21	106.40	8/30/05 3:51	104.89	8/30/05 12:21	103.43
8/29/05 19:31	106.36	8/30/05 4:01	104.86	8/30/05 12:31	103.41
8/29/05 19:41	106.34	8/30/05 4:11	104.82	8/30/05 12:41	103.37
8/29/05 19:51	106.32	8/30/05 4:21	104.80	8/30/05 12:51	103.33
8/29/05 20:01	106.28	8/30/05 4:31	104.80	8/30/05 13:01	103.31
8/29/05 20:11	106.26	8/30/05 4:41	104.76	8/30/05 13:11	103.27
8/29/05 20:21	106.24	8/30/05 4:51	104.74	8/30/05 13:21	103.25
8/29/05 20:31	106.20	8/30/05 5:01	104.70	8/30/05 13:31	103.23
8/29/05 20:41	106.18	8/30/05 5:11	104.66	8/30/05 13:41	103.19
8/29/05 20:51	106.14	8/30/05 5:21	104.64	8/30/05 13:51	103.17
8/29/05 21:01	106.12	8/30/05 5:31	104.60	8/30/05 14:01	103.13
8/29/05 21:11	106.07	8/30/05 5:41	104.58	8/30/05 14:11	103.11
8/29/05 21:21	106.05	8/30/05 5:51	104.56	8/30/05 14:21	103.09
8/29/05 21:31	106.01	8/30/05 6:01	104.52	8/30/05 14:31	103.03
8/29/05 21:41	105.99	8/30/05 6:11	104.50	8/30/05 14:41	103.00
8/29/05 21:51	105.95	8/30/05 6:21	104.48	8/30/05 14:51	102.98

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/30/05 15:01	102.96	8/30/05 23:31	101.55	8/31/05 8:01	100.22
8/30/05 15:11	102.92	8/30/05 23:41	101.53	8/31/05 8:11	100.18
8/30/05 15:21	102.90	8/30/05 23:51	101.51	8/31/05 8:21	100.16
8/30/05 15:31	102.88	8/31/05 0:01	101.49	8/31/05 8:31	100.14
8/30/05 15:41	102.84	8/31/05 0:11	101.45	8/31/05 8:41	100.10
8/30/05 15:51	102.82	8/31/05 0:21	101.43	8/31/05 8:51	100.08
8/30/05 16:01	102.80	8/31/05 0:31	101.41	8/31/05 9:01	100.06
8/30/05 16:11	102.76	8/31/05 0:41	101.37	8/31/05 9:11	100.04
8/30/05 16:21	102.74	8/31/05 0:51	101.35	8/31/05 9:21	100.00
8/30/05 16:31	102.72	8/31/05 1:01	101.31	8/31/05 9:31	99.98
8/30/05 16:41	102.70	8/31/05 1:11	101.29	8/31/05 9:41	99.98
8/30/05 16:51	102.66	8/31/05 1:21	101.27	8/31/05 9:51	99.96
8/30/05 17:01	102.64	8/31/05 1:31	101.22	8/31/05 10:01	99.94
8/30/05 17:11	102.60	8/31/05 1:41	101.20	8/31/05 10:11	99.94
8/30/05 17:21	102.55	8/31/05 1:51	101.18	8/31/05 10:21	99.92
8/30/05 17:31	102.53	8/31/05 2:01	101.16	8/31/05 10:31	99.89
8/30/05 17:41	102.51	8/31/05 2:11	101.12	8/31/05 10:41	99.87
8/30/05 17:51	102.49	8/31/05 2:21	101.10	8/31/05 10:51	99.85
8/30/05 18:01	102.45	8/31/05 2:31	101.08	8/31/05 11:01	99.83
8/30/05 18:11	102.43	8/31/05 2:41	101.06	8/31/05 11:11	99.83
8/30/05 18:21	102.39	8/31/05 2:51	101.02	8/31/05 11:21	99.83
8/30/05 18:31	102.37	8/31/05 3:01	101.00	8/31/05 11:31	99.87
8/30/05 18:41	102.35	8/31/05 3:11	100.98	8/31/05 11:41	99.92
8/30/05 18:51	102.31	8/31/05 3:21	100.96	8/31/05 11:51	99.87
8/30/05 19:01	102.29	8/31/05 3:31	100.92	8/31/05 12:01	99.83
8/30/05 19:11	102.27	8/31/05 3:41	100.90	8/31/05 12:11	99.77
8/30/05 19:21	102.23	8/31/05 3:51	100.87	8/31/05 12:21	99.75
8/30/05 19:31	102.19	8/31/05 4:01	100.83	8/31/05 12:31	99.71
8/30/05 19:41	102.17	8/31/05 4:11	100.81	8/31/05 12:41	99.49
8/30/05 19:51	102.15	8/31/05 4:21	100.77	8/31/05 12:51	99.42
8/30/05 20:01	102.12	8/31/05 4:31	100.75	8/31/05 13:01	99.42
8/30/05 20:11	102.10	8/31/05 4:41	100.73	8/31/05 13:11	99.38
8/30/05 20:21	102.06	8/31/05 4:51	100.71	8/31/05 13:21	99.36
8/30/05 20:31	102.04	8/31/05 5:01	100.69	8/31/05 13:31	99.32
8/30/05 20:41	102.02	8/31/05 5:11	100.65	8/31/05 13:41	99.30
8/30/05 20:51	101.98	8/31/05 5:21	100.63	8/31/05 13:51	99.28
8/30/05 21:01	101.96	8/31/05 5:31	100.61	8/31/05 14:01	99.26
8/30/05 21:11	101.94	8/31/05 5:41	100.59	8/31/05 14:11	99.22
8/30/05 21:21	101.92	8/31/05 5:51	100.55	8/31/05 14:21	99.20
8/30/05 21:31	101.88	8/31/05 6:01	100.53	8/31/05 14:31	99.18
8/30/05 21:41	101.86	8/31/05 6:11	100.51	8/31/05 14:41	99.14
8/30/05 21:51	101.84	8/31/05 6:21	100.47	8/31/05 14:51	99.12
8/30/05 22:01	101.80	8/31/05 6:31	100.45	8/31/05 15:01	99.10
8/30/05 22:11	101.78	8/31/05 6:41	100.42	8/31/05 15:11	99.07
8/30/05 22:21	101.76	8/31/05 6:51	100.40	8/31/05 15:21	99.05
8/30/05 22:31	101.74	8/31/05 7:01	100.36	8/31/05 15:31	99.01
8/30/05 22:41	101.70	8/31/05 7:11	100.34	8/31/05 15:41	98.99
8/30/05 22:51	101.67	8/31/05 7:21	100.32	8/31/05 15:51	98.95
8/30/05 23:01	101.63	8/31/05 7:31	100.28	8/31/05 16:01	98.93
8/30/05 23:11	101.61	8/31/05 7:41	100.26	8/31/05 16:11	98.91
8/30/05 23:21	101.59	8/31/05 7:51	100.24	8/31/05 16:21	98.89

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/31/05 16:31	98.85	9/1/05 1:01	97.56	9/1/05 9:31	96.31
8/31/05 16:41	98.83	9/1/05 1:11	97.52	9/1/05 9:41	96.29
8/31/05 16:51	98.81	9/1/05 1:21	97.50	9/1/05 9:51	96.25
8/31/05 17:01	98.79	9/1/05 1:31	97.48	9/1/05 10:01	96.23
8/31/05 17:11	98.75	9/1/05 1:41	97.46	9/1/05 10:11	96.21
8/31/05 17:21	98.73	9/1/05 1:51	97.44	9/1/05 10:21	96.19
8/31/05 17:31	98.71	9/1/05 2:01	97.40	9/1/05 10:31	96.17
8/31/05 17:41	98.69	9/1/05 2:11	97.40	9/1/05 10:41	96.13
8/31/05 17:51	98.64	9/1/05 2:21	97.36	9/1/05 10:51	96.11
8/31/05 18:01	98.63	9/1/05 2:31	97.34	9/1/05 11:01	96.09
8/31/05 18:11	98.61	9/1/05 2:41	97.30	9/1/05 11:11	96.07
8/31/05 18:21	98.56	9/1/05 2:51	97.30	9/1/05 11:21	96.05
8/31/05 18:31	98.54	9/1/05 3:01	97.28	9/1/05 11:31	96.01
8/31/05 18:41	98.52	9/1/05 3:11	97.23	9/1/05 11:41	95.99
8/31/05 18:51	98.48	9/1/05 3:21	97.21	9/1/05 11:51	95.95
8/31/05 19:01	98.46	9/1/05 3:31	97.17	9/1/05 12:01	95.93
8/31/05 19:11	98.44	9/1/05 3:41	97.15	9/1/05 12:11	95.90
8/31/05 19:21	98.42	9/1/05 3:51	97.15	9/1/05 12:21	95.88
8/31/05 19:31	98.40	9/1/05 4:01	97.11	9/1/05 12:31	95.86
8/31/05 19:41	98.36	9/1/05 4:11	97.09	9/1/05 12:41	95.82
8/31/05 19:51	98.34	9/1/05 4:21	97.07	9/1/05 12:51	95.80
8/31/05 20:01	98.32	9/1/05 4:31	97.05	9/1/05 13:01	95.78
8/31/05 20:11	98.30	9/1/05 4:41	97.03	9/1/05 13:11	95.74
8/31/05 20:21	98.26	9/1/05 4:51	96.99	9/1/05 13:21	95.74
8/31/05 20:31	98.24	9/1/05 5:01	96.97	9/1/05 13:31	95.70
8/31/05 20:41	98.22	9/1/05 5:11	96.95	9/1/05 13:41	95.68
8/31/05 20:51	98.20	9/1/05 5:21	96.93	9/1/05 13:51	95.66
8/31/05 21:01	98.18	9/1/05 5:31	96.91	9/1/05 14:01	95.64
8/31/05 21:11	98.13	9/1/05 5:41	96.87	9/1/05 14:11	95.62
8/31/05 21:21	98.11	9/1/05 5:51	96.85	9/1/05 14:21	95.58
8/31/05 21:31	98.09	9/1/05 6:01	96.83	9/1/05 14:31	95.56
8/31/05 21:41	98.05	9/1/05 6:11	96.79	9/1/05 14:41	95.52
8/31/05 21:51	98.03	9/1/05 6:21	96.79	9/1/05 14:51	95.50
8/31/05 22:01	98.01	9/1/05 6:31	96.77	9/1/05 15:01	95.47
8/31/05 22:11	97.99	9/1/05 6:41	96.73	9/1/05 15:11	95.43
8/31/05 22:21	97.95	9/1/05 6:51	96.70	9/1/05 15:21	95.41
8/31/05 22:31	97.95	9/1/05 7:01	96.68	9/1/05 15:31	95.39
8/31/05 22:41	97.91	9/1/05 7:11	96.64	9/1/05 15:41	95.37
8/31/05 22:51	97.87	9/1/05 7:21	96.62	9/1/05 15:51	95.33
8/31/05 23:01	97.87	9/1/05 7:31	96.60	9/1/05 16:01	95.31
8/31/05 23:11	97.83	9/1/05 7:41	96.58	9/1/05 16:11	95.29
8/31/05 23:21	97.81	9/1/05 7:51	96.56	9/1/05 16:21	95.27
8/31/05 23:31	97.79	9/1/05 8:01	96.54	9/1/05 16:31	95.23
8/31/05 23:41	97.77	9/1/05 8:11	96.52	9/1/05 16:41	95.21
8/31/05 23:51	97.73	9/1/05 8:21	96.48	9/1/05 16:51	95.19
9/1/05 0:01	97.73	9/1/05 8:31	96.46	9/1/05 17:01	95.17
9/1/05 0:11	97.69	9/1/05 8:41	96.44	9/1/05 17:11	95.15
9/1/05 0:21	97.64	9/1/05 8:51	96.42	9/1/05 17:21	95.11
9/1/05 0:31	97.62	9/1/05 9:01	96.38	9/1/05 17:31	95.09
9/1/05 0:41	97.60	9/1/05 9:11	96.36	9/1/05 17:41	95.07
9/1/05 0:51	97.58	9/1/05 9:21	96.34	9/1/05 17:51	95.05

DW-1 Pumping Test Data

Time	Drawdown	Time	Drawdown	Time	Drawdown
9/1/05 18:01	95.02	9/2/05 2:31	93.73	9/26/05 15:30	41.70
9/1/05 18:11	94.98	9/2/05 2:41	93.69	9/28/05 8:30	37.70
9/1/05 18:21	94.96	9/2/05 2:51	93.67		
9/1/05 18:31	94.94	9/2/05 3:01	93.65		
9/1/05 18:41	94.92	9/2/05 3:11	93.63		
9/1/05 18:51	94.88	9/2/05 3:21	93.59		
9/1/05 19:01	94.86	9/2/05 3:31	93.57		
9/1/05 19:11	94.84	9/2/05 3:41	93.55		
9/1/05 19:21	94.82	9/2/05 3:51	93.51		
9/1/05 19:31	94.80	9/2/05 4:01	93.51		
9/1/05 19:41	94.76	9/2/05 4:11	93.47		
9/1/05 19:51	94.74	9/2/05 4:21	93.45		
9/1/05 20:01	94.72	9/2/05 4:31	93.41		
9/1/05 20:11	94.70	9/2/05 4:41	93.39		
9/1/05 20:21	94.66	9/2/05 4:51	93.37		
9/1/05 20:31	94.64	9/2/05 5:01	93.32		
9/1/05 20:41	94.62	9/2/05 5:11	93.30		
9/1/05 20:51	94.60	9/2/05 5:21	93.28		
9/1/05 21:01	94.55	9/2/05 5:31	93.27		
9/1/05 21:11	94.53	9/2/05 5:41	93.24		
9/1/05 21:21	94.51	9/2/05 5:51	93.20		
9/1/05 21:31	94.49	9/2/05 6:01	93.18		
9/1/05 21:41	94.47	9/2/05 6:11	93.16		
9/1/05 21:51	94.43	9/2/05 6:21	93.14		
9/1/05 22:01	94.43	9/2/05 6:31	93.10		
9/1/05 22:11	94.39	9/2/05 6:41	93.10		
9/1/05 22:21	94.37	9/2/05 6:51	93.06		
9/1/05 22:31	94.35	9/2/05 7:01	93.04		
9/1/05 22:41	94.31	9/2/05 7:11	93.02		
9/1/05 22:51	94.29	9/2/05 7:21	93.00		
9/1/05 23:01	94.27	9/2/05 7:31	92.98		
9/1/05 23:11	94.25	9/2/05 7:41	92.94		
9/1/05 23:21	94.23	9/2/05 7:51	92.92		
9/1/05 23:31	94.19	9/2/05 8:01	92.90		
9/1/05 23:41	94.17	9/2/05 8:11	92.86		
9/1/05 23:51	94.14	9/2/05 8:21	92.83		
9/2/05 0:01	94.12	9/2/05 8:31	92.81		
9/2/05 0:11	94.10	9/2/05 8:41	92.79		
9/2/05 0:21	94.06	9/2/05 8:51	92.77		
9/2/05 0:31	94.04	9/2/05 9:01	92.73		
9/2/05 0:41	94.00	9/2/05 9:11	92.71		
9/2/05 0:51	94.00	9/2/05 9:21	92.69		
9/2/05 1:01	93.96	9/2/05 9:31	92.67		
9/2/05 1:11	93.94	9/2/05 9:41	92.63		
9/2/05 1:21	93.92	9/2/05 9:51	92.61		
9/2/05 1:31	93.88	9/2/05 10:01	92.59		
9/2/05 1:41	93.86	9/2/05 10:11	92.57		
9/2/05 1:51	93.84	9/2/05 10:21	92.53		
9/2/05 2:01	93.79	9/2/05 10:31	92.51		
9/2/05 2:11	93.77	9/2/05 10:41	92.49		
9/2/05 2:21	93.75	9/2/05 10:51	93.37		

OW-1 Water Level Data (from August '05 Pumping Test at DW-1)

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/3/05 12:49	0.00	8/4/05 14:19	12.08	8/5/05 15:49	21.66
8/3/05 13:19	0.41	8/4/05 14:49	12.27	8/5/05 16:19	21.85
8/3/05 13:49	1.71	8/4/05 15:19	12.43	8/5/05 16:49	22.07
8/3/05 14:19	2.16	8/4/05 15:49	12.62	8/5/05 17:19	22.26
8/3/05 14:49	2.44	8/4/05 16:19	12.78	8/5/05 17:49	22.45
8/3/05 15:19	2.73	8/4/05 16:49	12.97	8/5/05 18:19	22.61
8/3/05 15:49	3.01	8/4/05 17:19	13.16	8/5/05 18:49	22.54
8/3/05 16:19	3.24	8/4/05 17:49	13.32	8/5/05 19:19	22.89
8/3/05 16:49	3.46	8/4/05 18:19	13.48	8/5/05 19:49	23.11
8/3/05 17:19	3.68	8/4/05 18:49	13.67	8/5/05 20:19	23.30
8/3/05 17:49	3.96	8/4/05 19:19	13.86	8/5/05 20:49	23.49
8/3/05 18:19	4.15	8/4/05 19:49	14.08	8/5/05 21:19	23.68
8/3/05 18:49	4.38	8/4/05 20:19	14.27	8/5/05 21:49	23.87
8/3/05 19:19	4.60	8/4/05 20:49	14.46	8/5/05 22:19	24.06
8/3/05 19:49	4.79	8/4/05 21:19	14.65	8/5/05 22:49	24.22
8/3/05 20:19	5.04	8/4/05 21:49	14.84	8/5/05 23:19	24.44
8/3/05 20:49	5.58	8/4/05 22:19	15.00	8/5/05 23:49	24.63
8/3/05 21:19	5.87	8/4/05 22:49	15.19	8/6/05 0:19	24.82
8/3/05 21:49	6.12	8/4/05 23:19	15.38	8/6/05 0:49	25.01
8/3/05 22:19	6.34	8/4/05 23:49	15.57	8/6/05 1:19	25.20
8/3/05 22:49	6.57	8/5/05 0:19	15.76	8/6/05 1:49	25.39
8/3/05 23:19	6.79	8/5/05 0:49	15.95	8/6/05 2:19	25.58
8/3/05 23:49	7.04	8/5/05 1:19	16.14	8/6/05 2:49	25.77
8/4/05 0:19	7.26	8/5/05 1:49	16.30	8/6/05 3:19	25.93
8/4/05 0:49	7.48	8/5/05 2:19	16.49	8/6/05 3:49	26.12
8/4/05 1:19	7.71	8/5/05 2:49	16.68	8/6/05 4:19	26.31
8/4/05 1:49	7.90	8/5/05 3:19	16.84	8/6/05 4:49	26.50
8/4/05 2:19	8.12	8/5/05 3:49	17.06	8/6/05 5:19	26.69
8/4/05 2:49	8.31	8/5/05 4:19	17.22	8/6/05 5:49	26.85
8/4/05 3:19	8.50	8/5/05 4:49	17.44	8/6/05 6:19	27.04
8/4/05 3:49	8.66	8/5/05 5:19	17.63	8/6/05 6:49	27.20
8/4/05 4:19	8.85	8/5/05 5:49	17.82	8/6/05 7:19	27.39
8/4/05 4:49	9.07	8/5/05 6:19	18.01	8/6/05 7:49	27.55
8/4/05 5:19	9.23	8/5/05 6:49	18.20	8/6/05 8:19	27.74
8/4/05 5:49	9.42	8/5/05 7:19	18.42	8/6/05 8:49	27.93
8/4/05 6:19	9.61	8/5/05 7:49	18.58	8/6/05 9:19	28.12
8/4/05 6:49	9.77	8/5/05 8:19	18.74	8/6/05 9:49	28.31
8/4/05 7:19	9.96	8/5/05 8:49	18.96	8/6/05 10:19	28.53
8/4/05 7:49	10.15	8/5/05 9:19	19.18	8/6/05 10:49	28.69
8/4/05 8:19	10.34	8/5/05 9:49	19.37	8/6/05 11:19	28.88
8/4/05 8:49	10.31	8/5/05 10:19	19.56	8/6/05 11:49	29.07
8/4/05 9:19	10.34	8/5/05 10:49	19.75	8/6/05 12:19	29.26
8/4/05 9:49	10.53	8/5/05 11:19	19.94	8/6/05 12:49	29.45
8/4/05 10:19	10.72	8/5/05 11:49	20.13	8/6/05 13:19	29.64
8/4/05 10:49	10.88	8/5/05 12:19	20.32	8/6/05 13:49	29.86
8/4/05 11:19	11.07	8/5/05 12:49	20.51	8/6/05 14:19	30.05
8/4/05 11:49	11.23	8/5/05 13:19	20.70	8/6/05 14:49	30.24
8/4/05 12:19	11.42	8/5/05 13:49	20.89	8/6/05 15:19	30.43
8/4/05 12:49	11.58	8/5/05 14:19	21.12	8/6/05 15:49	30.62
8/4/05 13:19	11.77	8/5/05 14:49	21.27	8/6/05 16:19	30.84
8/4/05 13:49	11.92	8/5/05 15:19	21.47	8/6/05 16:49	31.03

OW-1 Water Level Data (from August '05 Pumping Test at DW-1)

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/6/05 17:19	31.16	8/7/05 18:49	41.77	8/8/05 20:19	54.09
8/6/05 17:49	31.35	8/7/05 19:19	42.02	8/8/05 20:49	54.34
8/6/05 18:19	31.54	8/7/05 19:49	42.25	8/8/05 21:19	54.59
8/6/05 18:49	31.73	8/7/05 20:19	42.56	8/8/05 21:49	54.88
8/6/05 19:19	31.95	8/7/05 20:49	41.17	8/8/05 22:19	55.13
8/6/05 19:49	32.17	8/7/05 21:19	42.47	8/8/05 22:49	55.39
8/6/05 20:19	32.33	8/7/05 21:49	42.85	8/8/05 23:19	55.67
8/6/05 20:49	32.52	8/7/05 22:19	43.10	8/8/05 23:49	55.95
8/6/05 21:19	32.71	8/7/05 22:49	43.32	8/9/05 0:19	56.21
8/6/05 21:49	32.90	8/7/05 23:19	43.58	8/9/05 0:49	56.46
8/6/05 22:19	33.09	8/7/05 23:49	43.83	8/9/05 1:19	56.75
8/6/05 22:49	33.28	8/8/05 0:19	44.05	8/9/05 1:49	57.03
8/6/05 23:19	33.47	8/8/05 0:49	44.27	8/9/05 2:19	57.32
8/6/05 23:49	33.70	8/8/05 1:19	44.49	8/9/05 2:49	57.60
8/7/05 0:19	33.92	8/8/05 1:49	44.75	8/9/05 3:19	57.85
8/7/05 0:49	34.11	8/8/05 2:19	44.97	8/9/05 3:49	58.11
8/7/05 1:19	34.30	8/8/05 2:49	45.19	8/9/05 4:19	58.36
8/7/05 1:49	34.49	8/8/05 3:19	45.44	8/9/05 4:49	58.64
8/7/05 2:19	34.71	8/8/05 3:49	45.70	8/9/05 5:19	58.90
8/7/05 2:49	34.90	8/8/05 4:19	45.92	8/9/05 5:49	59.15
8/7/05 3:19	35.09	8/8/05 4:49	46.11	8/9/05 6:19	59.40
8/7/05 3:49	35.31	8/8/05 5:19	46.36	8/9/05 6:49	59.66
8/7/05 4:19	35.53	8/8/05 5:49	46.58	8/9/05 7:19	59.94
8/7/05 4:49	35.72	8/8/05 6:19	46.81	8/9/05 7:49	60.20
8/7/05 5:19	35.94	8/8/05 6:49	47.03	8/9/05 8:19	59.69
8/7/05 5:49	36.13	8/8/05 7:19	47.28	8/9/05 8:49	60.26
8/7/05 6:19	36.36	8/8/05 7:49	47.47	8/9/05 9:19	60.58
8/7/05 6:49	36.58	8/8/05 8:19	47.79	8/9/05 9:49	60.80
8/7/05 7:19	36.77	8/8/05 8:49	48.01	8/9/05 10:19	61.05
8/7/05 7:49	36.96	8/8/05 9:19	48.26	8/9/05 10:49	61.33
8/7/05 8:19	37.18	8/8/05 9:49	48.52	8/9/05 11:19	61.59
8/7/05 8:49	37.40	8/8/05 10:19	48.77	8/9/05 11:49	61.87
8/7/05 9:19	37.43	8/8/05 10:49	49.02	8/9/05 12:19	62.13
8/7/05 9:49	37.81	8/8/05 11:19	49.28	8/9/05 12:49	62.41
8/7/05 10:19	38.03	8/8/05 11:49	49.50	8/9/05 13:19	62.66
8/7/05 10:49	38.26	8/8/05 12:19	49.75	8/9/05 13:49	62.95
8/7/05 11:19	38.51	8/8/05 12:49	50.00	8/9/05 14:19	63.20
8/7/05 11:49	38.70	8/8/05 13:19	50.26	8/9/05 14:49	63.49
8/7/05 12:19	38.92	8/8/05 13:49	50.51	8/9/05 15:19	63.80
8/7/05 12:49	39.17	8/8/05 14:19	50.80	8/9/05 15:49	64.15
8/7/05 13:19	39.43	8/8/05 14:49	51.05	8/9/05 16:19	64.44
8/7/05 13:49	39.65	8/8/05 15:19	51.30	8/9/05 16:49	64.72
8/7/05 14:19	39.84	8/8/05 15:49	51.55	8/9/05 17:19	65.01
8/7/05 14:49	40.03	8/8/05 16:19	51.90	8/9/05 17:49	65.26
8/7/05 15:19	40.25	8/8/05 16:49	52.19	8/9/05 18:19	65.54
8/7/05 15:49	40.47	8/8/05 17:19	52.41	8/9/05 18:49	65.83
8/7/05 16:19	40.73	8/8/05 17:49	52.73	8/9/05 19:19	66.11
8/7/05 16:49	40.92	8/8/05 18:19	52.95	8/9/05 19:49	66.40
8/7/05 17:19	41.17	8/8/05 18:49	53.23	8/9/05 20:19	66.65
8/7/05 17:49	41.33	8/8/05 19:19	53.52	8/9/05 20:49	66.94
8/7/05 18:19	41.55	8/8/05 19:49	53.80	8/9/05 21:19	67.22

OW-1 Water Level Data (from August '05 Pumping Test at DW-1)

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/9/05 21:49	67.54	8/10/05 23:19	79.27	8/12/05 0:49	89.67
8/9/05 22:19	67.79	8/10/05 23:49	79.49	8/12/05 1:19	89.86
8/9/05 22:49	68.04	8/11/05 0:19	79.71	8/12/05 1:49	90.08
8/9/05 23:19	68.33	8/11/05 0:49	79.90	8/12/05 2:19	90.30
8/9/05 23:49	68.58	8/11/05 1:19	80.09	8/12/05 2:49	90.53
8/10/05 0:19	68.87	8/11/05 1:49	80.31	8/12/05 3:19	90.72
8/10/05 0:49	69.12	8/11/05 2:19	80.50	8/12/05 3:49	90.97
8/10/05 1:19	69.40	8/11/05 2:49	80.69	8/12/05 4:19	91.16
8/10/05 1:49	69.69	8/11/05 3:19	80.88	8/12/05 4:49	91.41
8/10/05 2:19	69.94	8/11/05 3:49	81.10	8/12/05 5:19	91.63
8/10/05 2:49	70.19	8/11/05 4:19	81.29	8/12/05 5:49	91.85
8/10/05 3:19	70.45	8/11/05 4:49	81.52	8/12/05 6:19	92.11
8/10/05 3:49	70.70	8/11/05 5:19	81.74	8/12/05 6:49	92.33
8/10/05 4:19	70.92	8/11/05 5:49	81.93	8/12/05 7:19	92.58
8/10/05 4:49	71.14	8/11/05 6:19	82.09	8/12/05 7:49	92.80
8/10/05 5:19	71.36	8/11/05 6:49	82.31	8/12/05 8:19	92.99
8/10/05 5:49	71.65	8/11/05 7:19	82.50	8/12/05 8:49	93.02
8/10/05 6:19	71.87	8/11/05 7:49	82.69	8/12/05 9:19	92.52
8/10/05 6:49	72.19	8/11/05 8:19	83.00	8/12/05 9:49	91.76
8/10/05 7:19	72.44	8/11/05 8:49	83.22	8/12/05 10:19	91.47
8/10/05 7:49	72.76	8/11/05 9:19	83.41	8/12/05 10:49	91.35
8/10/05 8:19	72.95	8/11/05 9:49	83.63	8/12/05 11:19	91.28
8/10/05 8:49	73.23	8/11/05 10:19	83.86	8/12/05 11:49	91.25
8/10/05 9:19	73.51	8/11/05 10:49	84.05	8/12/05 12:19	91.22
8/10/05 9:49	73.77	8/11/05 11:19	84.27	8/12/05 12:49	91.22
8/10/05 10:19	73.99	8/11/05 11:49	84.46	8/12/05 13:19	91.22
8/10/05 10:49	74.21	8/11/05 12:19	84.68	8/12/05 13:49	91.25
8/10/05 11:19	74.46	8/11/05 12:49	84.58	8/12/05 14:19	91.32
8/10/05 11:49	74.72	8/11/05 13:19	84.99	8/12/05 14:49	91.32
8/10/05 12:19	74.94	8/11/05 13:49	85.37	8/12/05 15:19	91.35
8/10/05 12:49	75.19	8/11/05 14:19	85.53	8/12/05 15:49	91.38
8/10/05 13:19	75.44	8/11/05 14:49	85.69	8/12/05 16:19	91.44
8/10/05 13:49	75.70	8/11/05 15:19	85.88	8/12/05 16:49	91.47
8/10/05 14:19	75.92	8/11/05 15:49	86.10	8/12/05 17:19	91.54
8/10/05 14:49	76.14	8/11/05 16:19	86.29	8/12/05 17:49	91.57
8/10/05 15:19	76.36	8/11/05 16:49	86.42	8/12/05 18:19	91.60
8/10/05 15:49	76.61	8/11/05 17:19	86.61	8/12/05 18:49	91.63
8/10/05 16:19	76.84	8/11/05 17:49	86.80	8/12/05 19:19	91.70
8/10/05 16:49	77.06	8/11/05 18:19	86.99	8/12/05 19:49	91.73
8/10/05 17:19	77.28	8/11/05 18:49	87.21	8/12/05 20:19	91.79
8/10/05 17:49	77.50	8/11/05 19:19	87.40	8/12/05 20:49	91.85
8/10/05 18:19	77.44	8/11/05 19:49	87.62	8/12/05 21:19	91.89
8/10/05 18:49	77.63	8/11/05 20:19	87.81	8/12/05 21:49	91.95
8/10/05 19:19	77.82	8/11/05 20:49	88.00	8/12/05 22:19	91.98
8/10/05 19:49	78.01	8/11/05 21:19	88.19	8/12/05 22:49	92.04
8/10/05 20:19	78.16	8/11/05 21:49	88.41	8/12/05 23:19	92.07
8/10/05 20:49	78.32	8/11/05 22:19	88.63	8/12/05 23:49	92.14
8/10/05 21:19	78.51	8/11/05 22:49	88.82	8/13/05 0:19	92.20
8/10/05 21:49	78.70	8/11/05 23:19	89.01	8/13/05 0:49	92.26
8/10/05 22:19	78.89	8/11/05 23:49	89.23	8/13/05 1:19	92.30
8/10/05 22:49	79.08	8/12/05 0:19	89.45	8/13/05 1:49	92.36

OW-1 Water Level Data (from August '05 Pumping Test at DW-1)

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/13/05 2:19	92.42	8/14/05 3:49	95.52	8/15/05 5:19	99.41
8/13/05 2:49	92.45	8/14/05 4:19	95.58	8/15/05 5:49	99.47
8/13/05 3:19	92.52	8/14/05 4:49	95.65	8/15/05 6:19	99.56
8/13/05 3:49	92.58	8/14/05 5:19	95.71	8/15/05 6:49	99.63
8/13/05 4:19	92.64	8/14/05 5:49	95.77	8/15/05 7:19	99.69
8/13/05 4:49	92.68	8/14/05 6:19	95.87	8/15/05 7:49	99.75
8/13/05 5:19	92.74	8/14/05 6:49	95.93	8/15/05 8:19	99.85
8/13/05 5:49	92.80	8/14/05 7:19	95.99	8/15/05 8:49	99.82
8/13/05 6:19	92.87	8/14/05 7:49	96.09	8/15/05 9:19	100.01
8/13/05 6:49	92.93	8/14/05 8:19	96.18	8/15/05 9:49	100.16
8/13/05 7:19	92.99	8/14/05 8:49	96.31	8/15/05 10:19	100.32
8/13/05 7:49	93.02	8/14/05 9:19	96.37	8/15/05 10:49	100.42
8/13/05 8:19	93.09	8/14/05 9:49	96.47	8/15/05 11:19	100.51
8/13/05 8:49	93.15	8/14/05 10:19	96.56	8/15/05 11:49	100.64
8/13/05 9:19	93.21	8/14/05 10:49	96.66	8/15/05 12:19	100.73
8/13/05 9:49	93.28	8/14/05 11:19	96.72	8/15/05 12:49	100.86
8/13/05 10:19	93.34	8/14/05 11:49	96.82	8/15/05 13:19	100.92
8/13/05 10:49	92.99	8/14/05 12:19	96.91	8/15/05 13:49	101.02
8/13/05 11:19	93.21	8/14/05 12:49	97.00	8/15/05 14:19	101.11
8/13/05 11:49	93.34	8/14/05 13:19	97.07	8/15/05 14:49	101.21
8/13/05 12:19	93.43	8/14/05 13:49	97.16	8/15/05 15:19	101.30
8/13/05 12:49	93.53	8/14/05 14:19	97.23	8/15/05 15:49	101.40
8/13/05 13:19	93.59	8/14/05 14:49	97.32	8/15/05 16:19	101.49
8/13/05 13:49	93.69	8/14/05 15:19	97.42	8/15/05 16:49	101.56
8/13/05 14:19	93.72	8/14/05 15:49	97.48	8/15/05 17:19	101.65
8/13/05 14:49	93.81	8/14/05 16:19	97.57	8/15/05 17:49	101.74
8/13/05 15:19	93.88	8/14/05 16:49	97.67	8/15/05 18:19	101.81
8/13/05 15:49	93.94	8/14/05 17:19	97.73	8/15/05 18:49	101.90
8/13/05 16:19	94.00	8/14/05 17:49	97.83	8/15/05 19:19	101.97
8/13/05 16:49	94.07	8/14/05 18:19	97.89	8/15/05 19:49	102.03
8/13/05 17:19	94.16	8/14/05 18:49	97.95	8/15/05 20:19	102.00
8/13/05 17:49	94.22	8/14/05 19:19	98.05	8/15/05 20:49	102.06
8/13/05 18:19	94.29	8/14/05 19:49	98.14	8/15/05 21:19	102.09
8/13/05 18:49	94.35	8/14/05 20:19	98.14	8/15/05 21:49	102.12
8/13/05 19:19	94.41	8/14/05 20:49	98.14	8/15/05 22:19	102.19
8/13/05 19:49	94.48	8/14/05 21:19	98.21	8/15/05 22:49	102.25
8/13/05 20:19	94.54	8/14/05 21:49	98.30	8/15/05 23:19	102.31
8/13/05 20:49	94.60	8/14/05 22:19	98.36	8/15/05 23:49	102.35
8/13/05 21:19	94.67	8/14/05 22:49	98.43	8/16/05 0:19	102.44
8/13/05 21:49	94.70	8/14/05 23:19	98.52	8/16/05 0:49	102.47
8/13/05 22:19	94.79	8/14/05 23:49	98.58	8/16/05 1:19	102.53
8/13/05 22:49	94.82	8/15/05 0:19	98.65	8/16/05 1:49	102.60
8/13/05 23:19	94.92	8/15/05 0:49	98.71	8/16/05 2:19	102.66
8/13/05 23:49	95.01	8/15/05 1:19	98.81	8/16/05 2:49	102.72
8/14/05 0:19	95.05	8/15/05 1:49	98.87	8/16/05 3:19	102.79
8/14/05 0:49	95.11	8/15/05 2:19	98.93	8/16/05 3:49	102.85
8/14/05 1:19	95.17	8/15/05 2:49	99.00	8/16/05 4:19	102.91
8/14/05 1:49	95.27	8/15/05 3:19	99.09	8/16/05 4:49	102.98
8/14/05 2:19	95.33	8/15/05 3:49	99.15	8/16/05 5:19	103.04
8/14/05 2:49	95.39	8/15/05 4:19	99.25	8/16/05 5:49	103.10
8/14/05 3:19	95.46	8/15/05 4:49	99.31	8/16/05 6:19	103.17

OW-1 Water Level Data (from August '05 Pumping Test at DW-1)

Time	Drawdown	Time	Drawdown	Time	Drawdown
8/16/05 6:49	103.23	8/17/05 8:19	106.29	8/31/05 0:01	109.33
8/16/05 7:19	103.29	8/17/05 8:49	106.55	8/31/05 9:31	107.87
8/16/05 7:49	103.39	8/17/05 9:19	106.74	8/31/05 23:31	105.79
8/16/05 8:19	103.48	8/17/05 9:49	106.86	9/1/05 23:31	102.35
8/16/05 8:49	103.55	8/17/05 10:19	106.93	9/2/05 14:01	100.29
8/16/05 9:19	103.64	8/17/05 10:49	107.02		
8/16/05 9:49	103.74	8/17/05 11:19	107.81		
8/16/05 10:19	103.80	8/17/05 11:49	108.92		
8/16/05 10:49	103.86	8/17/05 12:19	109.52		
8/16/05 11:19	103.96	8/17/05 12:49	109.96		
8/16/05 11:49	104.05	8/17/05 13:19	110.34		
8/16/05 12:19	104.11	8/17/05 13:49	110.72		
8/16/05 12:49	104.21	8/17/05 14:19	111.03		
8/16/05 13:19	104.27	8/17/05 14:49	111.38		
8/16/05 13:49	104.37	8/17/05 15:19	111.70		
8/16/05 14:19	104.40	8/17/05 15:49	111.98		
8/16/05 14:49	104.49	8/17/05 16:19	112.30		
8/16/05 15:19	104.56	8/17/05 16:49	112.61		
8/16/05 15:49	104.62	8/17/05 17:19	112.90		
8/16/05 16:19	104.71	8/17/05 17:49	113.18		
8/16/05 16:49	104.78	8/17/05 18:19	113.43		
8/16/05 17:19	104.84	8/17/05 18:49	113.72		
8/16/05 17:49	104.94	8/17/05 19:19	114.00		
8/16/05 18:19	105.00	8/17/05 19:49	114.25		
8/16/05 18:49	105.09	8/17/05 20:19	114.54		
8/16/05 19:19	105.13	8/17/05 20:49	114.82		
8/16/05 19:49	105.16	8/17/05 21:19	115.07		
8/16/05 20:19	105.22	8/17/05 21:49	115.36		
8/16/05 20:49	105.28	8/17/05 22:19	115.61		
8/16/05 21:19	105.35	8/17/05 22:49	115.86		
8/16/05 21:49	105.41	8/17/05 23:19	116.12		
8/16/05 22:19	105.47	8/17/05 23:49	116.37		
8/16/05 22:49	105.54	8/18/05 0:19	116.62		
8/16/05 23:19	105.57	8/18/05 0:49	116.91		
8/16/05 23:49	105.66	8/18/05 1:19	117.16		
8/17/05 0:19	105.69	8/18/05 1:49	117.44		
8/17/05 0:49	105.79	8/18/05 2:19	117.73		
8/17/05 1:19	105.85	8/18/05 2:49	118.01		
8/17/05 1:49	105.92	8/18/05 3:19	118.30		
8/17/05 2:19	105.98	8/18/05 3:49	118.58		
8/17/05 2:49	106.01	8/18/05 4:19	118.86		
8/17/05 3:19	106.07	8/18/05 4:49	119.15		
8/17/05 3:49	106.14	8/28/05 14:01	119.37		
8/17/05 4:19	106.20	8/28/05 18:01	118.64		
8/17/05 4:49	106.26	8/28/05 23:31	117.60		
8/17/05 5:19	106.33	8/29/05 9:31	115.77		
8/17/05 5:49	106.39	8/29/05 23:31	113.31		
8/17/05 6:19	106.45	8/30/05 0:01	113.24		
8/17/05 6:49	106.52	8/30/05 10:01	111.60		
8/17/05 7:19	106.58	8/30/05 13:31	111.00		
8/17/05 7:49	106.64	8/30/05 23:31	109.39		

OW-2a Water Level Data (from August '05 Pumping Test at DW-1)

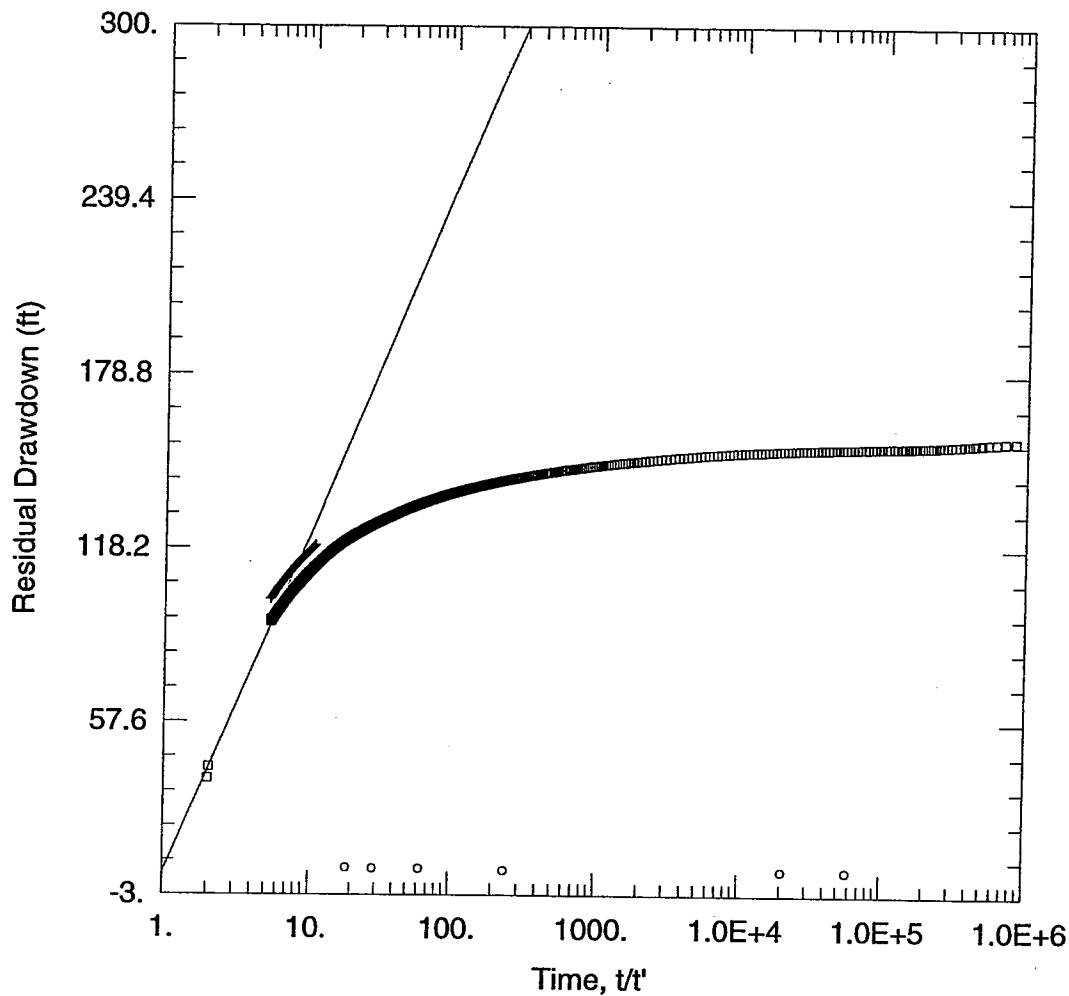
Time Drawdown

8/6/05 11:37	0.00
8/11/05 10:38	1.32
8/12/05 10:35	1.79
8/13/05 10:18	2.30
8/14/05 9:37	2.90
8/15/05 9:32	3.37
8/16/05 8:03	2.80
8/17/05 9:20	2.80
8/18/05 8:45	3.40
8/19/05 10:30	3.60
8/20/05 9:00	4.40
8/21/05 11:13	5.00
8/22/05 9:50	5.45
8/22/05 13:39	5.45
8/22/05 15:24	5.51
8/22/05 15:45	5.51
8/22/05 16:04	5.53
8/23/05 8:14	5.60
8/24/05 8:31	6.11
8/25/05 12:13	6.10
8/26/05 13:00	6.40
8/30/05 0:00	8.45
9/6/05 13:20	10.75
9/12/05 12:30	11.85
9/19/05 11:40	12.60
9/26/05 15:30	13.00

OW-2b Water Level Data (from August '05 Pumping Test at DW-1)

Time Drawdown

8/6/05 11:37	136.80
8/11/05 10:38	151.06
8/13/05 10:20	153.70
8/14/05 9:37	154.87
8/15/05 9:32	155.90
8/16/05 8:03	157.10
8/17/05 9:20	158.25
8/18/05 8:49	159.33
8/19/05 10:33	160.52
8/20/05 9:00	161.51
8/21/05 11:15	162.70
8/22/05 9:50	163.57
8/22/05 13:42	163.03
8/22/05 15:27	163.85
8/22/05 15:48	163.85
8/22/05 16:06	163.85
8/23/05 8:17	164.52
8/24/05 8:34	165.49
8/25/05 12:13	166.70
8/26/05 13:00	167.60
9/6/05 13:20	175.10
9/12/05 12:30	175.70
9/19/05 11:40	175.10
9/25/05 15:30	172.10



WELL TEST ANALYSIS

Data Set: K:\PROJECT\5011\ptestII\PT-0506.aqt

Date: 10/12/05

Time: 17:09:30

AQUIFER DATA

Saturated Thickness: 300. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
PW 1	1347580	751400

Observation Wells

Well Name	X (ft)	Y (ft)
DW-1	1347579	751401
+ OBW-1	1347705	751423
◦ OBW-2	1347787	751649

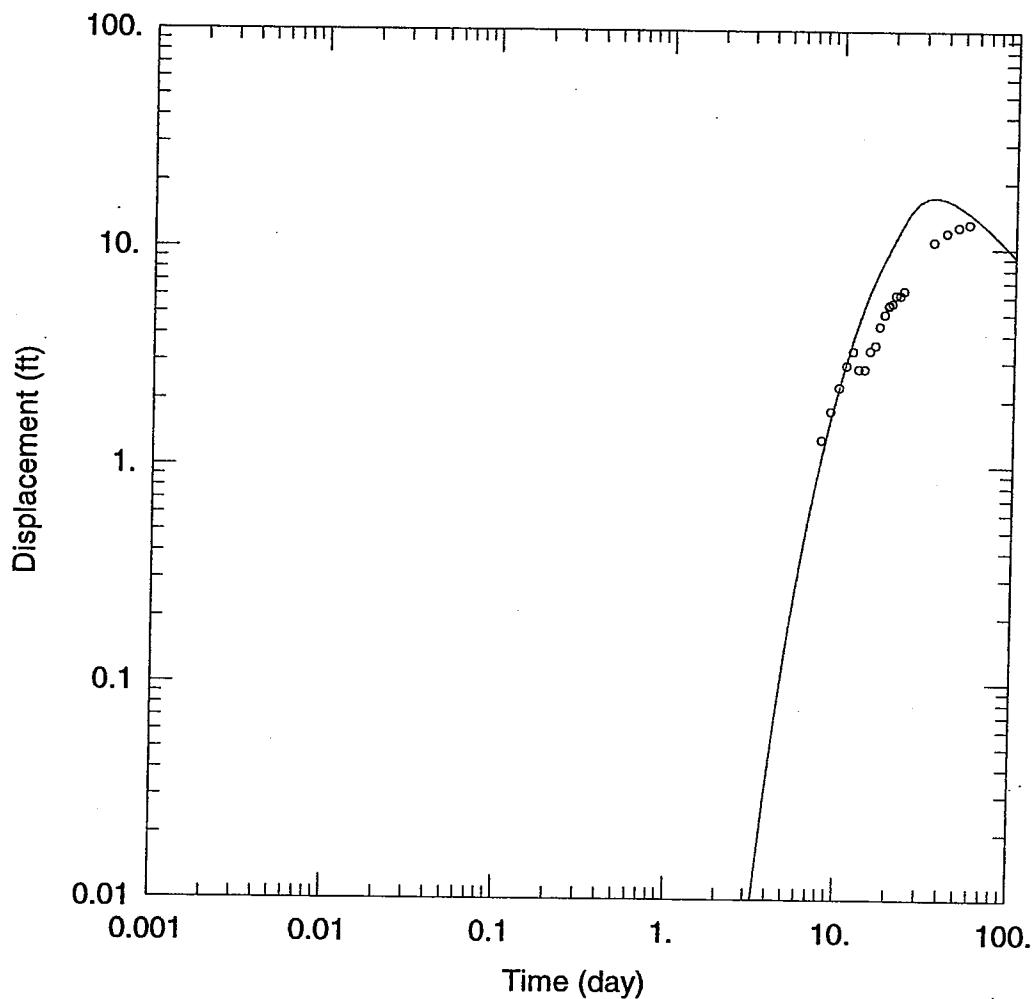
SOLUTION

Aquifer Model: Confined

$T = 38.01 \text{ ft}^2/\text{day}$

Solution Method: Theis (Recovery)

$S/S' = 0.9171$



WELL TEST ANALYSIS

Data Set: K:\PROJECT\5011\ptestII\PT-0506.aqt
 Date: 10/12/05

Time: 17:26:05

WELL DATA

Pumping Wells		
Well Name	X (ft)	Y (ft)
PW 1	1347580	751400

Observation Wells		
Well Name	X (ft)	Y (ft)
OBW-2a	1347787	751649

SOLUTION

Aquifer Model: Confined

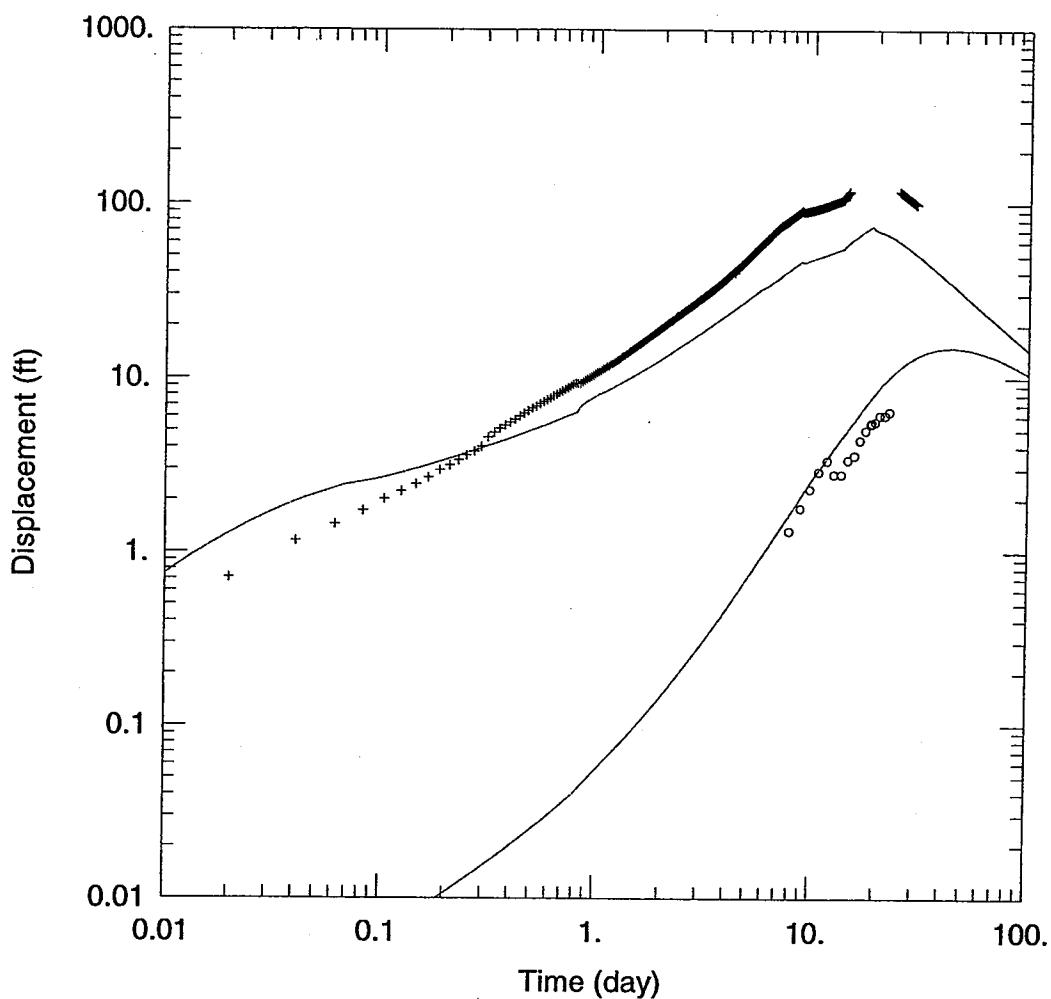
$$T = 58.83 \text{ ft}^2/\text{day}$$

$$Kz/Kr = 1.$$

Solution Method: Theis

$$S = 0.04925$$

$$b = 300. \text{ ft}$$



WELL TEST ANALYSIS

Data Set: K:\PROJECT\5011\ptest\PTOW-0506.aqt

Date: 10/10/05

Time: 12:08:40

AQUIFER DATA

Saturated Thickness: 300. ft

Slab Block Thickness: 1. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
PW 1	1347580	751400

Observation Wells

Well Name	X (ft)	Y (ft)
+ OBW-1	1347705	751423
◦ OBW-2	1347787	751649

SOLUTION

Aquifer Model: Fractured

$$K = 0.1508 \text{ ft/day}$$

$$K' = 2.141E-5 \text{ ft/day}$$

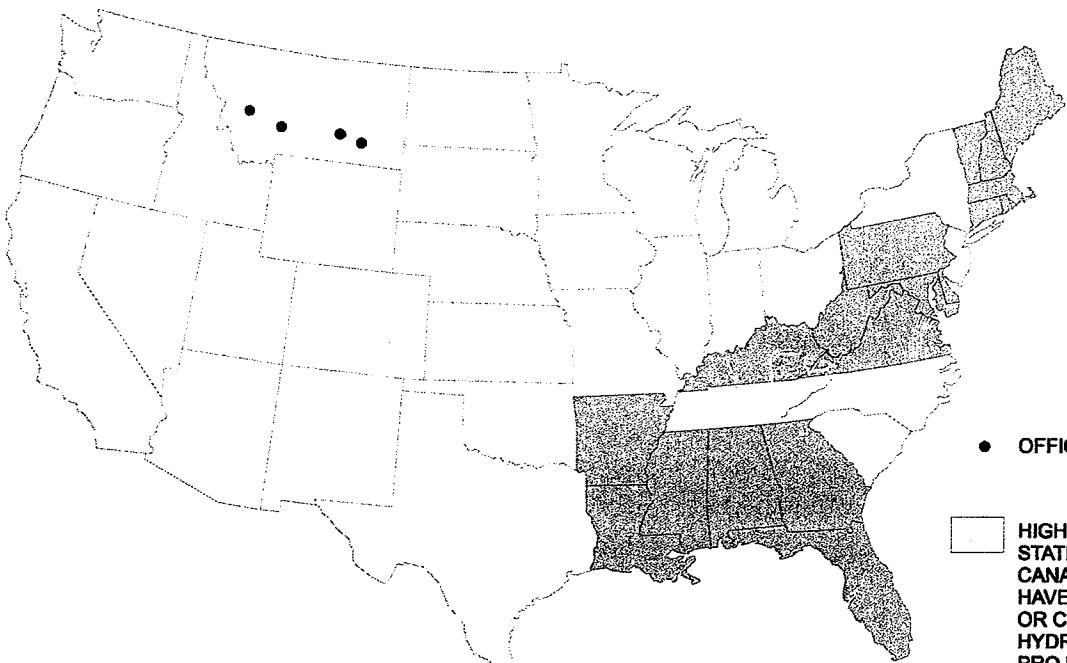
$$S_w = 0.$$

Solution Method: Moench w/slab blocks

$$S_s = 5.56E-9 \text{ ft}^{-1}$$

$$S_s' = 0.0001829 \text{ ft}^{-1}$$

$$S_f = 0.5$$



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FAX: (406) 656-8912

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Missoula, MT 59801
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FAX: (406) 542-2619

COLSTRIP
Phone: (406) 656-8305
Fax: (406) 656-8912

Appendix 3:

Preliminary Assessment of Water Treatment Options for the Elkhorn Goldfields Sourdough Project



34 N. Last Chance Gulch, Suite 104
Helena, MT 59601
Tel: 406-449-2121
Fax: 406-449-6768

November 17, 2005

Bill Thompson
Principal, Project Manager
Hydrometrics, Inc.
3020 Bozeman Ave
Helena, MT 59601

**Subject: Preliminary Assessment of Water Treatment Options
for the Elkhorn Goldfields Sourdough Project**

Dear Bill:

This letter summarizes the results of CDM's preliminary assessment of treatment options for removing arsenic in groundwater associated with the Elkhorn Goldfields Sourdough Project. As requested in your November 2nd scoping letter, this assessment includes:

- A brief summary of options
- Recommended technology
- Performance projections for the recommended technology
- An outline of tasks required for implementation
- An assessment of the time requirements for implementation

Introduction

Elkhorn Goldfields is in the process of evaluating expansion of its historic mining operations in southwestern Montana near Boulder. In order to develop the underground mining project, it has been determined that both active and passive dewatering will be required. Active dewatering will involve the installation of one or more pumpback wells to dewater the surrounding aquifer. Groundwater pumping depths are estimated to be about 400 feet below the ground surface. Passive dewatering will include the use of sumps within the mine workings to capture groundwater that is encountered during production operations.



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The groundwater has been found to contain low levels of arsenic and will require treatment prior to discharge via an NPDES permit. For purposes of this study, it is assumed that captured water will be treated for arsenic and then pumped to an elevation approximately 400 feet above the treatment plant location for discharge.

Design Basis and Assumptions

This section summarizes the major criteria used to assess and select the best treatment approach for this application. Design criterion includes flow, water quality, discharge limits and operational requirements.

Estimated Flow

Pumpback flows are expected to vary from 100 to 300 gallons per minute (gpm) with an estimated average flow of 150 gpm. The flow of water captured in sumps within the mine workings is unknown but expected to be less than 10% of the pumpback flow, on average. For purposes of this study, the average flow of groundwater to the treatment system will be 150 gpm.

Raw Groundwater Quality

The quality of raw groundwater was determined from samples collected during pump tests (attached). An evaluation of this data shows that it is high quality water, except for the presence of low levels of arsenic. The arsenic concentrations are expected to range from 10 to 25 parts per billion (ppb). Subsequent testing for arsenic species indicates that all of the arsenic is present as arsenate (+5). For purposes of this study, the arsenic concentration was assumed to be 25 ppb.

The total suspended solids (TSS) concentration was not measured but is expected to be very low (less than 1 mg/L) in the groundwater pumpback well. The TSS concentration in sump water collected in the mine workings will likely be much higher than well water, but is impossible to predict at this time.

Discharge Limits

The treatment objectives for this project are to reduce the arsenic concentration to below 5 ppb, which is required for discharge via a NPDES permit.

Operational Requirements

Selection of the best treatment technology must consider a number of site specific factors and operational requirements. Based on CDM's understanding of the overall objectives for this



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project, the ideal treatment system should be: 1) a proven technology capable of meeting discharge limits on a continuous and predictable basis; 2) commercially available and skid mounted for rapid installation; 3) simple to operate and maintain; 4) automated to allow unattended operation; and 5) cost effective. Other site specific factors may also need to be considered after discussions with site personnel during final technology selection.

Summary of Options

Based on flow, water quality and treatment objectives, three treatment technologies were considered for this application. They include:

- Coagulation/Filtration
- Ion Exchange
- Adsorptive Media

Each of these technologies is proven and commercially available for application at this site. In addition, each of these basic options has advantages and disadvantages and variations in performance that need to be considered prior to selection of the best alternative. A brief discussion of each option is presented in this section.

Coagulation/Filtration

This option involves the addition of an iron reagent, such as ferric chloride or ferric sulfate, to the raw incoming water to coagulate and precipitate arsenic from solution as an iron-arsenic-hydroxy precipitate. Process equipment would consist of two systems operating in parallel, each consisting of a reaction tank followed by a media filter. The iron reagent is injected upstream of the reaction tank at a specified iron-to-arsenic ratio and the corresponding precipitate is removed in the media filter. When the pressure drop across the media filters reaches about 15 psig, one of the two systems goes offline and the media filter is backwashed using either raw water or treated effluent to remove the iron-arsenic precipitate. During this time, all feed water continues to be treated in the online system. When the first filter backwash is completed, the second system is backwashed in the same manner.

While this technology can be supplied as a skid-mounted, fully automated system, CDM does not believe this is the best treatment option for the Elkhorn application for the following reasons:



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- The need for chemical addition increases the complexity of treatment operations, level of operator attention to maintain proper dosage, and the need to maintain pumps and chemical inventories.
- Addition of iron chemicals results in the production of solid residuals, which must be removed and disposed.
- Addition of iron reagents result in a decrease in pH, which may require the addition of caustic for pH control.
- Bench tests would likely be required to determine the optimum iron dosage and ability to meet the 5 ppb limit. Experience has shown that 5 ppb is difficult to meet using this technology, except at very high iron dosages.

Ion Exchange

This option involves the use of commercially available strong base resins to remove arsenic and other anions from solution via an ion exchange (IX) process. The anion exchange process consists of two fixed-bed columns containing an anion exchange resin in the chloride form to remove arsenic from water by exchanging arsenic for chloride. The process also removes nitrate, sulfate, uranium, and bicarbonate. The efficiency of the IX process for arsenic and nitrate removal is strongly affected by sulfate that is preferred over both arsenic and nitrate. Once the resin reaches its capacity, the resin is regenerated with a sodium chloride solution. The regeneration process produces a liquid waste brine stream that is high in sulfate, nitrate, and arsenic.

Like the coagulation/filtration process, this technology can be supplied as a skid-mounted, fully automated system. However, CDM does not recommend this approach primarily because the process produces waste brine, high in arsenic that requires management and disposal (potentially as a hazardous waste). The need for chemical handling also increases the level of operator attention required.

Adsorptive Media

On January 18, 2001, the U.S. Environmental Protection Agency (EPA) finalized the maximum contaminant level (MCL) for arsenic at 10 ppb. The final rule requires all community and non-transient, non-community water systems to comply with the new standard by February 2006. One of the benefits of the new Arsenic Rule was that a substantial amount of research and development was completed to identify simple, cost effective treatment technologies, such as adsorption, for removing arsenic to very low levels. As a result, several new



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adsorbent materials are now commercially available in skid mounted systems for removing low levels of arsenic from water sources.

Adsorption technology involves the use of a fixed bed of media that, given sufficient residence time, removes arsenic from water using physical attraction forces. The adsorption process is generally very simple, consisting of two fixed-bed columns (operating in parallel) containing an adsorptive media capable of removing arsenic from water. The efficiency of the adsorption media for arsenic is affected by the form of arsenic present (valance of +3 or +5), pH and residence time. In general, the efficiency of most media is improved at a near neutral or slightly acidic pH, high residence times and when arsenic (+5) is present. Chemical addition is generally not necessary, but may be considered when the pH is high or arsenic (3) is the primary species present. The capacity of some media is also affected by competing ions such as silica. Periodically, the media is backwashed to remove suspended solids and to restratify the bed to minimize channeling. Once the media reaches its capacity, it is removed and replaced with new media. The spent media is then disposed of as a solid waste.

In general, there are four different adsorptive media that are proven and commercially available in skid mounted systems from various vendors. Two of the media are iron products, either ferric oxide (E33) or ferric hydroxide (GFH), and the other two are iron-modified media (G2 and AAFS50). While there are several other types of iron-bearing media that are potentially available, such as zero valent iron and Bauxol, these media should be considered still under development for commercial use and would require pilot testing to determine both performance and capacity prior to implementation at this site. In addition, these media are generally best suited for passive flow applications and are not readily available in skid mounted systems. Consequently, CDM's assessment of options focused on the four adsorptive media that are commercially available.

Recommended Technology

CDM recommends adsorption as the preferred technology for the Elkhorn project for the following reasons:

- The technology is proven to meet the required limit of 5 ppb, precluding the need to complete bench or pilot scale testing. The media has also been shown to remove heavy metals to low levels.
- Systems are commercially available as skid-mounted, pre-plumbed and wired systems for rapid delivery and installation.



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- Addition of chemicals is not required.
- The media is expected to last more than a year, resulting in a very low frequency of changeouts.
- Spent media can be disposed of as an ordinary solid waste since repeated tests have shown that it passes the Toxicity Characteristic Leaching Procedure (TCLP) for arsenic.
- Backwashes are expected to be very infrequent, on the order of once a month versus every day with the coagulation/filtration process. This assumes that the TSS load to the system is very low (1 to 5 mg/L). If the sump water is high in suspended solids, then a separate filter system dedicated to that source may be required to minimize adsorption media backwashes.
- Operations are very simple, significantly reducing the operating labor requirements.

CDM completed a cursory evaluation of the four different iron adsorption media discussed above and recommends consideration of either the Bayoxide E33 supplied by Severn Trent or GFH supplied by US Filter for this application. This recommendation is based on a review of data included in a detailed study completed by the EPA in December 2004 that, in general, showed higher capacities and lower operating costs than the other two media.

Process Description

Influent flow from the well(s) is pumped to the treatment system and directed downward through both adsorbers containing the E33 media. Arsenic is removed in the adsorbers and the effluent is collected in a tank and pumped to the point of discharge. The tank is equipped with level transmitters to start and stop the pump.

The pressure differential (ΔP) through each adsorber is monitored automatically. The clean bed operating pressure is usually about 10 psig. When the ΔP on either adsorber exceeds the high ΔP setpoint (normally 20 psi), that adsorber is automatically taken off line and backwashed using raw well or treated water. After the 12 min backwash, the adsorber is returned to service. If the TSS is found to be relatively high in any of the raw water sources, causing frequent backwashes, then a prefiltration step may be required to limit backwashing of the adsorption media filters.

If the system does not backwash automatically, then each adsorber is manually taken out of service for backwashing (or fluffing) once every 1 to 3 months, depending upon the feed



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water quality, to expand the compacted media bed and to remove solids that may have built up within the bed. At the end of the media life (determined by routine analysis of the effluent arsenic concentration), the spent media is removed from the vessels and replaced with new media.

Performance Projections

For purposes of this study, CDM obtained performance and cost information from Severn Trent for their standard 300 gpm unit (Model APU 300) containing the E33 media. Based on the design criteria discussed earlier, Severn Trent provided the following performance projections for this application:

- Average Flow Capacity: 150 gpm
- Max Flow Capacity: 300 gpm
- Influent Arsenic Concentration: 25 ppb
- Effluent Arsenic Concentration: < 5 ppb
- Loaded Media Volume: 152 ft³ (76 ft³ per vessel)
- Working Capacity (until 5 ppb breakthrough): 90 million gallons
- Estimated Media Life: 13.7 months
- Backwash Volume: 5,280 gallons every 1 to 3 months (assuming TSS in feed water is less than 1 mg/L)

These estimates may change based on actual feed water chemistry and presence of potential competing ions in solution. For example, if the influent arsenic concentration is found to average 12.5 ppb, then the media life will double to about 27 months.

Capital and Operating Cost Estimates

This section provides an estimate of the capital and operating costs for this application.

Capital Costs

Full-scale implementation of this treatment system would include the following equipment:



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- SORB 33 Model APU-300 arsenic treatment system from Severn Trent (see attached specifications). This system is a skid-mounted unit, pre-plumbed and wired for quick installation. The system consists of two 150 gpm media vessels for a maximum flow rate of 300 gpm. The system is fully automated for unattended operation. Skid dimensions are approximately 6'W x 13'L x 9'H.
- A 5,000-gallon effluent collection tank with two 25 HP pumps to collect and transfer treated water to the discharge location (assumes 400' of pressure head). The actual tank and pump sizes will need to be determined during engineering design.
- Backwash collection tank (est. 5000 gallons) or infiltration pit. The choice between a tank or infiltration pit as well as the ultimate disposal of the backwash water will depend on site specific factors and regulatory requirements, which will need to be determined later.
- Building to house treatment equipment. The building will require power, heat and lights.

The estimated total purchased equipment cost for the treatment system is \$163,500 (Table 1). This cost does not include engineering, design and construction which are site specific and beyond the scope of this study.

Table 1
Estimated Equipment Costs

Item	Description	Est. Cost
Treatment Skid	SORB 33 Model APU-300 arsenic treatment system (1)	\$125,000
Effluent Tank	5,000 gallon plastic	\$7,500
Effluent Tank Level	Miltronics	\$3,500
Two Effluent Pumps	Centrifugal 150 gpm at 440', 25 HP	\$20,000
Backwash Tank	5,000 gallon plastic	\$7,500
Total		\$163,500

(1) Includes freight and vendor field support and startup services



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Operating Costs

Operating costs for energy and media replacement (Table 2), which are the major cost items, were estimated to be about \$0.69 per 1000 gallons treated using the following assumptions:

- Energy costs include the pumping costs from the groundwater to the treatment building (400' TDH), through the treatment system (10 psig) and up to the point of discharge (400' TDH). Energy costs are based on \$0.075 per kw-hr.
- Media replacement (152 ft³) assumed every 13.7 months.

Additional costs for maintenance, operating labor and sample analysis will also need to be added but are expected to be relatively low due to the simplicity of operations.

Table 2
Estimated O&M Costs

Item	Est. Annual Cost	Est. Cost per 1000 gallons
Energy	\$19,884	\$0.25
Media Replacement	\$34,700	\$0.44
Total	\$54,584	\$0.69

Estimated Schedule of Activities

Table 3 outlines the anticipated tasks and preliminary schedule for implementation of the proposed treatment system at the Elkhorn site. Based on this schedule, the total time to complete this project is estimated at between 4 and 5 months. This assumes the building is constructed while the equipment is on order. The long lead time for this project is delivery of the arsenic treatment system. Depending on schedule requirements, there are several options that could be considered to shorten the schedule, if deemed necessary.

CDM

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Table 3
Estimated Schedule for Installation

Task	Description	Purpose	Est. Duration (wks)
1	Site Visit	Determine site location, utility locations, and other site specific issues	<1
2	Conceptual Design	Complete a data gaps analysis and develop final process flow diagram and determine discharge location for backwash water	1
3	Engineering and Design	Size and specify equipment, develop building drawings, assemble specifications, etc.	3 to 4
4	Equipment Procurement & Building Construction	Issue PO's, approve drawings and procure equipment to site	10 to 12
5	Equipment Installation	Install all process equipment and hook up water and utility connections	2
6	Startup	Complete shakedown, startup and operator training	1
	Total		17 to 20

Thank you for the opportunity to assist you on this project. Please don't hesitate to call if you have any questions or want to discuss this project further.

Very truly yours,



Bob Kimball, P.E.
Senior Project Engineer
Camp Dresser & McKee Inc.

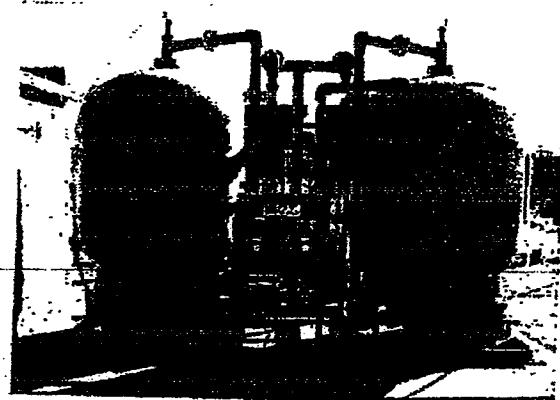
cc: Martin Carlson

Elkhorn Mine Treatment Evaluation Analytical Parameter List

Parameter	PDLG
Field Parameters	
Eh	
pH	
Specific Conductivity	
Temperature	
Laboratory - Non Metals	
pH	NA
Total Dissolved Solids	10 mg/L
Total suspended solids	10 mg/L
Total Alkalinity as CaCO ₃	1 mg/L
Ammonia as N	0.1 mg/L
Bicarbonate (HCO ₃)	1 mg/L
Calcium (Ca)	5 mg/L
Chloride (Cl)	1 mg/L
Fluoride (F)	0.1
Magnesium (Mg)	5 mg/L
NO ₃ +NO ₂ as N	0.1 mg/L
Phosphorus, Ortho	0.01 mg/L
Potassium (K)	5 mg/L
Silica (SiO ₂)	1 mg/L
Sodium (Na)	5 mg/L
Sulfate (SO ₄)	1 mg/L
Sulfide (S ₂)	1 mg/L
Laboratory - Metals (Total)	
Antimony (Sb)	0.05 mg/L
Arsenic (As)	0.003 mg/L
Arsenic (As ⁺³)	0.003 mg/L
Cadmium (Cd)	0.0001 mg/L
Chromium (Cr)	0.01 mg/L
Copper (Cu)	0.001 mg/L
Iron (Fe)	0.01 mg/L
Lead (Pb)	0.003 mg/L
Manganese (Mn)	0.01 mg/L
Vanadium (V)	0.01 mg/L
Selenium (Se)	0.001 mg/L
Zinc (Zn)	0.01 mg/L

SORB 33® APU - As Removal Package Unit Model APU-300

The SORB 33® arsenic removal system from Severn Trent Services is economical, simple to operate and requires virtually no labor. In this simple pump-and-treat adsorption system, the contaminated water passes through a robust granular ferric oxide media, Bayoxide® E33. As water passes through the media, arsenic is adsorbed and removed to a level below the 4 micrograms per liter ($\mu\text{g/l}$). The SORB 33 system requires no cleaning, no regeneration and no complex, labor-intensive steps.



The dry, crystalline Bayoxide E33 media was designed with a high capacity for arsenic, providing long operating cycles and low operating costs. The media's life expectancy is dependent on site-specific water quality and operating levels. Media is filled into the vessels from sacks by gravity or by hydraulic educting. The exhausted media is non-hazardous and can be sent to a landfill, passing TCLP requirements. Spent media can be removed hydraulically or by vacuum.

The SORB 33 APU-300 is a dual vessel skid-mounted adsorption system designed to accommodate a maximum flow rate of 300 gallons per minute (GPM).

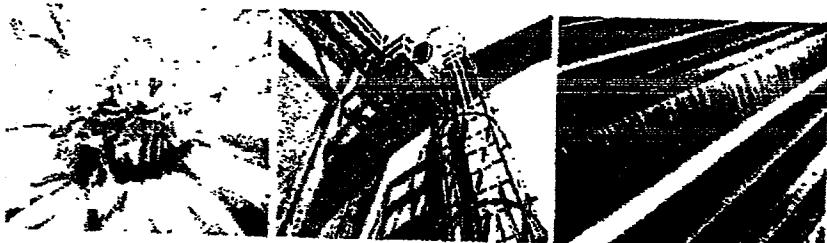
Features:

- Removes both As (III) and As (V) below 4 $\mu\text{g/l}$
- Robust dry media with high capacity for arsenic
- Long media life under continuous operation
- Very low residual effluents: <0.1% of water treated
- No re-pumping
- No chemicals for regeneration
- Low maintenance- no moving parts
- Small footprint
- NSF Standard 61 Approved media

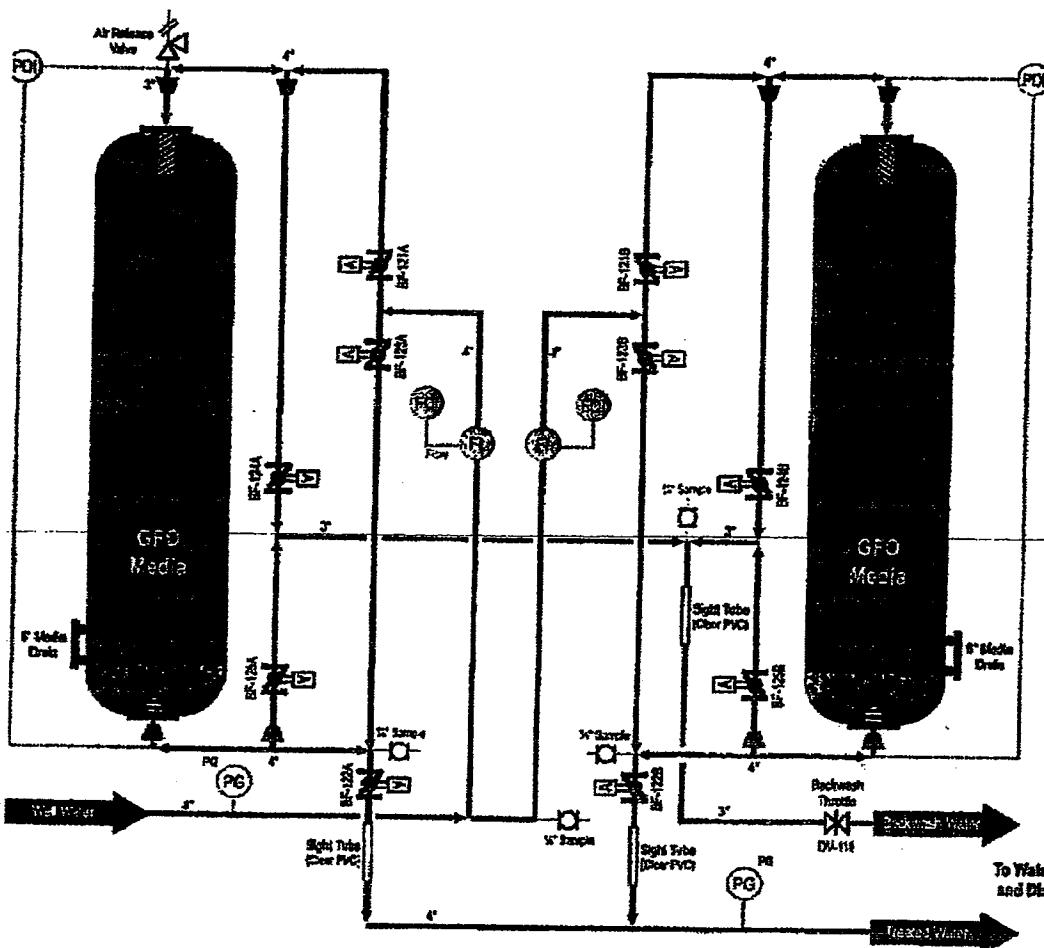
Benefits:

- Low capital costs
- Low operating costs
- Readily available media in any quantity
- Easy disposal of spent media- no hazardous waste generated
- Low extractables
- Low shipping cost and long shelf life of dry media
- Unattended operation- no manpower required

Bayoxide E33 is a registered trademark of Bayer AG.



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Capacity		Dimensions & Materials	
Normal Flow Rate (4.5 Min EBCT)	260 GPM	Number of Tanks	2
Design Flow Rate	300 GPM	Materials	FRP & Polyethylene
Nominal Cycle Length Based on inlet As Level of 50 $\mu\text{g/L}$	57,000,000 Gals	Tank Dimensions	63" Dia x 86" Hgt
Specific Flow Rate	6.9 GPM/ft ²	Skid Dimension	11W x 150L x 108H
Backwash Flow Rate (per Vessel)	220 GPM	Empty Weight	4,500 Lbs
Media		Piping Materials	Sch 80 PVC
Volume (not included in Price)	152 ft ³	Piping Size	4 inches (4 in Tie-in)
Bed Depth	42 Inches	Butterfly Valve Materials	PVC
Freeboard	40%	Distributor Configuration	Hub & Spoke
Media Size	9 x 32 Mesh	Underbedding Gravel Size	1/8" x 1/16"
Normal to Design Empty Bed Contact Time	3.8 Min	Gravel Volume (per Vessel)	14.0 ft ³
Controls & Instruments			
Control Panel includes PLC to position electric actuated butterfly valves for adsorption cycle, backwash and forward rinse. Backwash can be initiated manually or by timer or high differential pressure. Backwash flow throttled by diaphragm rate set valve. Instruments include turbine flow meter, gallonage counter, pressure differential and pressure gauge. 24V, 100V, 220V-50Hz, 60Hz electrical.			

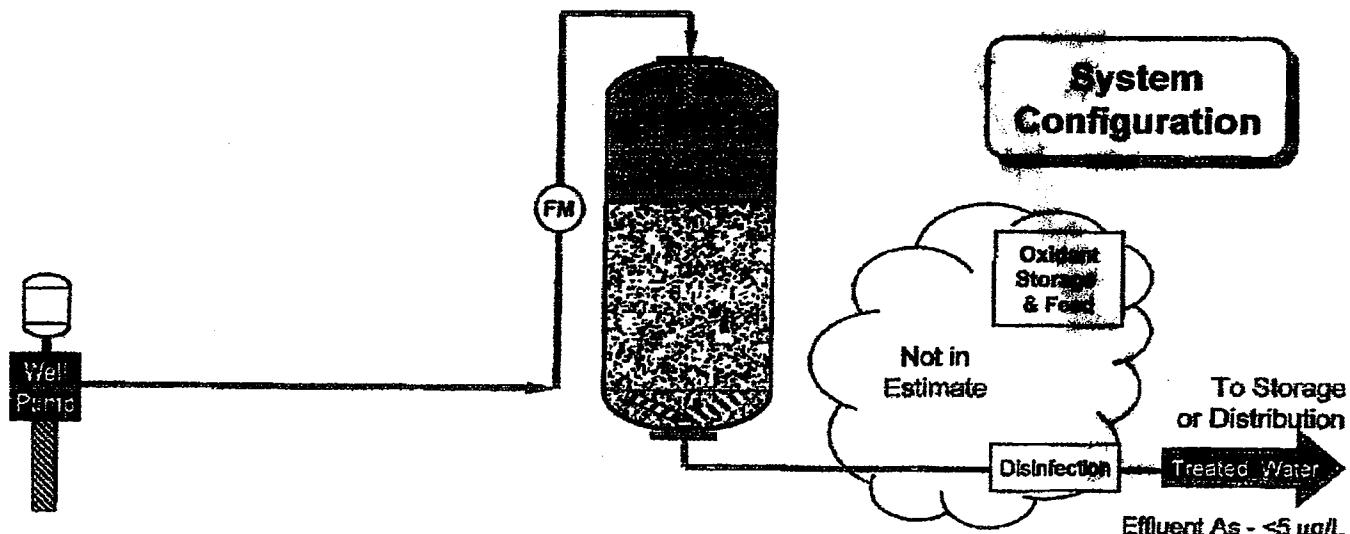
SORB 33™ As Removal System Sizing & Estimate

System Requirements

Client:	CDM Mining Client	Well Utilization Factor:	50%
Name of Site:	Groundwater	Ambient/Final pH:	7.7/7.7
Capacity:	0.43 MGD 300 gpm	As Analysis:	25 µg/L
Treatment:	300 gpm	Backwash Volume:	3,200 gals
		Max Capacity:	350 gpm
		pH Adjust't Value:	No
		Reagent:	No
		Residuals Treat:	No

System Design

No. of Adsorbers:	1 Pellets	Total Media Inventory:	134 ft ³
Model No.:	APU-300		
Diameter:	5.3 ft	Media Bed Depth:	3.1 ft
Specific Velocity:	6.9 gpm/ft ²	Flow Configuration:	Parallel
Design Pressure:	80 psig	Working Capacity:	80,000-96,000 BVs
System Footprint:	16 Ft x 6 Ft	Cycle Life:	12.1 Months



Estimated Operating Costs

Avg Media Replace & Disposal:	\$34,678 per Yr
Other Treatment Costs:	\$0

Average Operating Costs:	\$34,700 per Yr
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Unit Operating Costs (80,000 BV's): \$0.440 per 1,000 Gals

Issued: 25-Oct-05



Filtration
Products

Appendix 4:

Baseline Water Resources Sampling and Analysis Plan

BASELINE WATER RESOURCES SAMPLING AND ANALYSIS PLAN

ELKHORN GOLDFIELDS, INC. ELKHORN PROJECT

1.0 INTRODUCTION

Elkhorn Goldfields, Inc. is currently planning a mining operation in the historic Elkhorn Mining District near Elkhorn, Montana (Figure 1). The planned gold-mining operation will access several deposits located on private land. There are several small, but higher-grade deposits on private land that we are currently planning to mine using underground mining methods. Three or more underground developments are contemplated producing no more than 1000 tons per day depending upon development and production schedules. At this time our life-of-mine plan contemplates a 5 to 7 year mine life depending upon economic conditions, though this plan can be extended in continued exploration drilling discovers additional resources.

As part of pre-mining activities, Elkhorn Goldfields intends to characterize the current water quality of groundwater and surface water in areas that may potentially be impacted by mining operations. This Baseline Water Resources Sampling and Analysis Plan (SAP) has been prepared to guide the collection and analysis of groundwater and surface water samples from monitoring sites within and adjacent to the project area, for the purpose of assessing current water quality conditions.

A substantial database of surface water and groundwater chemistry data was generated during previous exploration and mine planning activities in the Elkhorn Mining District. Water quality monitoring conducted from 1989 through 1995 on behalf of the Santa Fe Pacific Gold Corporation was summarized in a comprehensive water resources report prepared by Maxim Technologies (1996). The monitoring proposed in this SAP will supplement the existing database, by retaining appropriate monitoring locations and a similar list of analytical parameters, including common constituents, nutrients, and metals.

2.0 SURFACE WATER MONITORING

Surface water monitoring in the vicinity of the Elkhorn Project from 1989-1995 was routinely conducted at 21 monitoring locations, along with 19 "supplemental" locations

where monitoring was less frequent (Maxim Technologies, 1996). Based on the location of the ore body and the proposed mining activities, seven (7) established surface water sites and one (1) new site have been selected for inclusion in this Baseline SAP. Surface water monitoring locations, methods, frequency, analytical parameters, and quality control samples are discussed below.

2.1 LOCATIONS AND METHODS

Baseline surface water monitoring locations are shown on Figure 2 and are described in Table 1. Sites SW-1, SW-2, SW-3, SW-6, SW-9, SW-10, and SW-11 were previously sampled during the 1989-1995 monitoring period. Site SP-1 is a spring located in a tributary drainage to Turnley Creek, and has been included due to its proximity to a potential land application disposal (LAD) area for water produced by mine dewatering. All surface water monitoring sites will be surveyed with a global positioning system (GPS) during the initial site visit.

Water quality samples will be collected from each surface water-monitoring site by passing an uncapped sample container across the area of flow, such that the sample is representative of the channel cross-section. If stream velocity or wading conditions preclude this technique, the sample will be collected from the center of the channel. When wading, samples are collected upstream of the sampler; during unsafe wading conditions, samples are collected from the stream bank. Sample containers will be rinsed three times with sample water prior to sample collection, and will be labeled with a unique sample identification number, the date and time of collection, the type of sample collected (preservation, filtered/unfiltered), and required analyses. Samples will be preserved in the field as appropriate for the intended analysis (e.g. nitric acid preservation to pH <2 for metals analysis), and stored on ice in coolers at approximately 4°C for transport. The samples will be stored in coolers or refrigerated from the time of collection until delivery to the analytical laboratory. Sample container and preservation requirements for each sample location are summarized below:

- Common Ions – 1000 mL plastic bottle, no preservative
- Nutrients – 250 mL plastic bottle, H₂SO₄ preservative
- Total Recoverable Metals – 250 mL plastic bottle, HNO₃ preservative

All water quality sampling information, including sample sites, sample numbers, date and time of sample collection, field parameter measurements, flow measurements, and other notes and observations, will be documented in waterproof ink in a dedicated project field notebook.

The parameters pH, specific conductance (SC), dissolved oxygen (DO), and water temperature will be measured at each site concurrently with sample collection. Field meters will be calibrated daily according to factory instructions, with calibration results recorded in the field notebook and on calibration forms. Dissolved oxygen and water temperature measurements are obtained directly in the stream or seep, if possible. For pH and SC measurements, a clean container will be filled with sample water for parameter measurement. Results are recorded in the field notebook and on standard sample forms.

Field meters are checked periodically throughout the day for drift by measuring standard solutions (pH buffers, SC standard solutions), and are recalibrated as necessary.

Surface water flow measurements will be collected using one of three methods, depending on the channel geometry and stream or seep discharge rate:

- Marsh-McBirney current meter and wading rod (velocity-area method);
- Portable trapezoidal flume; or
- Volumetric method.

If stream or seepage flow is too small to allow measurement by one of the above methods, or streamflow conditions preclude safe wading, flow will be estimated by the field sampling team.

The Marsh-McBirney current meter is used to measure streamflow at larger, wadeable stream sites. Measurement of streamflow is performed in accordance with the area-velocity method developed by the USGS (USGS, 1977). In general, the entire stream width is divided into subsections and the stream velocity measured at the midpoint of each subsection and at a depth equivalent to six-tenths of the total subsection depth. The velocity in each subsection is then multiplied by the cross-sectional area to obtain the flow volume through each subsection. The subsection flows are then summed to obtain the total streamflow rate. Streamflow measurements are typically collected in a stream reach as straight and free of obstructions as possible to minimize potential measurement error introduced by converging or turbulent flow paths.

Streamflow measurements on smaller streams or seeps will be obtained using a portable flume such as a 90° v-notch cutthroat flume. This flow measurement method is based on equations developed by Skogerboe et al (1967). To measure streamflow, the flume is placed and leveled in the streambed, and the full streamflow directed through the flume throat. Water depth or head measurements are then collected at specified locations in the upstream (H_a) and downstream (H_b) sections of the flume. The head measurements are used to verify proper functioning of the flume and to calculate streamflow.

Collection of volumetric flow measurements consists of directing the flow into a container of known volume (such as a five-gallon bucket or one liter sample bottle), and recording the time required to fill the known volume. Volumetric flow measurements are typically limited to monitoring points with small seepage flows or discrete discharge points (e.g. pipes).

2.2 MONITORING SCHEDULE

In order to obtain background water quality data under a variety of flow conditions, the baseline surface water sites will be sampled four times in 2006, as follows:

- March/April – coinciding with the early runoff period;
- May – coinciding with the peak of the annual hydrograph;

- June – coinciding with the falling limb (post-runoff) of the annual hydrograph; and
- September – coinciding with baseflow conditions.

Specific sampling dates will be dependent on site access and climatic conditions (precipitation patterns). Sampling will continue on this schedule beyond 2006 as necessary to provide operational monitoring for exploration and/or mining activities that are underway.

2.3 ANALYTICAL PARAMETERS

Surface water samples will be submitted to state-certified analytical laboratory, under standard chain-of-custody protocols, for analysis of common constituents, nutrients, and total recoverable metals. The analytical parameter list for the baseline water resources sampling is in Table 2. As noted in Table 2, a number of metals will be analyzed during the initial baseline monitoring event only, to confirm the results of previous monitoring. Subsequent baseline sampling events will likely not include these parameters, unless the initial sampling indicates their presence at detectable concentrations.

2.4 FIELD QUALITY CONTROL SAMPLES

Each surface water monitoring event will include collection of field quality control samples to aid in the assessment of overall data quality. One (1) field duplicate sample and one (1) field blank sample will be collected per monitoring event.

Field duplicate samples will be collected to estimate field and laboratory precision. Field duplicate samples will be collected by sequentially filling two sets of sample bottles at the same monitoring location, assigning unique sample numbers to the two samples, and submitting both samples to the laboratory for analysis.

Blank samples will be collected to estimate the potential for sample contamination from any materials contacting sample water (bottles, preservatives etc.) and from random atmospheric contamination. The blank sample will be collected by filling sample bottles with reagent-free deionized water in the field, preserving as appropriate, and submitting the sample blind to the laboratory for analysis.

3.0 GROUNDWATER MONITORING

Groundwater monitoring in the vicinity of the Elkhorn Project from 1989-1995 was routinely conducted at 12 monitoring locations (Maxim Technologies, 1996). Based on the location of the ore body and the proposed mining activities, five (5) established groundwater sites and one (1) new site, recently installed during aquifer testing at the proposed mine site, have been selected for inclusion in this Baseline SAP. Groundwater monitoring locations, methods, frequency, analytical parameters, and quality control samples are discussed below.

3.1 LOCATIONS AND METHODS

Baseline groundwater monitoring locations are shown on Figure 2 and are described (including completion details) in Table 3. Wells MW-2, MW-3, MW-5, MW-7, and MTHG-B were previously sampled during the 1989-1995 monitoring period. Site EGI-2 is a deep well installed in 2005 near the ore zone as part of the dewatering analysis for the mine. All groundwater monitoring sites will be surveyed with a GPS during the initial site visit.

Collection of groundwater samples will generally consist of three steps:

1. Measurement of static water level;
2. Well purging and monitoring for field parameter stabilization; and
3. Water quality sample collection.

Prior to collection of samples, static water level will be measured at each well using an electric water level probe to determine the depth to groundwater below a specified measuring point (typically the top of the PVC or steel well casing). Water level measurements will be combined with surveyed monitoring well elevations to compute groundwater elevations at each monitoring point. Water level measurements may also be collected during well purging and following groundwater sampling to assess well recovery.

Depending on the depth to groundwater, a submersible pump, peristaltic pump, or plastic bailers will be used to purge and sample wells. Purging will consist of removing three to five well volumes (including well casing and borehole annulus volume) while routinely monitoring field parameters (pH, dissolved oxygen, temperature, specific conductance) at least twice during removal of each well volume. Samples will be collected only after one of the following purge conditions is met:

- A minimum of three well volumes have been removed and successive field parameter measurements agree to within the stability criteria given below;
- At least five well volumes have been removed although field parameter stabilization criteria are not yet met; or
- The well has been bailed or pumped dry and allowed to recover sufficiently such that adequate sample volumes for rinsing equipment and collecting samples can be removed.

Criteria for field parameter stabilization are as follows:

Parameter (Units)	Stability Criteria
pH (standard units)	± 0.1 s.u.
water temperature ($^{\circ}$ C)	± 0.2 $^{\circ}$ C
specific conductance ($\mu\text{mhos}/\text{cm}$)	$\pm 5\%$ ($SC \leq 100 \mu\text{mhos}/\text{cm}$) $\pm 3\%$ ($SC > 100 \mu\text{mhos}/\text{cm}$)
dissolved oxygen (mg/L)	± 0.3 mg/L

NOTE: Stability criteria obtained from USGS *National Field Manual for the Collection*

Following well purging, final field parameter measurements will be collected and recorded, and groundwater quality samples will be obtained. Sample bottles will be filled directly from the pump or bailer discharge port.

General field parameter measurement and water quality sampling procedures have been presented in Section 2.1 above: sample containers will be rinsed three times with sample water prior to sample collection, then preserved as appropriate for the intended analysis (e.g. nitric acid preservation to pH <2 for metals analysis), and stored on ice in coolers at approximately 4°C for transport. Filtered samples (for dissolved metals analyses) will be processed through a single-use 0.45 µm pore-size disposable filter prior to preservation. Any groundwater sampling equipment reused between monitoring locations (e.g. pumps, discharge lines, etc.) will be thoroughly decontaminated between uses.

All groundwater quality sampling information, including sample sites, sample numbers, date and time of sample collection, field parameter measurements, static water level measurements, pumping rates, well purging information, and other notes and observations, will be documented in waterproof ink in a dedicated project field notebook.

3.2 MONITORING SCHEDULE

Baseline groundwater monitoring in 2006 will be conducted on a semiannual schedule. Monitoring will be conducted to coincide with the May and September surface water monitoring events; these monitoring events will presumably provide groundwater data during both high groundwater (May) and low groundwater (September) conditions. Monitoring will continue on this schedule beyond 2006 assuming that exploration and/or mining operations are underway. The schedule and monitoring plan may be updated to reflect any modifications that occur during the permitting process.

3.3 ANALYTICAL PARAMETERS

Groundwater samples will be submitted to a state-certified analytical laboratory under standard chain-of-custody protocols, for analysis of common constituents, nutrients, and dissolved metals. The parameter list for groundwater samples will be identical to that for surface water samples (Table 2), with the exception that metals analyses for groundwater samples will be for the dissolved fraction. As noted above, groundwater metals samples will be filtered in the field (using a 0.45 µm filter) prior to preserving with nitric acid.

As with surface water samples, a number of metals will be analyzed during the initial baseline groundwater monitoring event only, to confirm the results of previous monitoring (Table 2). Subsequent baseline sampling events will likely not include these parameters, unless the initial sampling indicates their presence at detectable concentrations.

3.4 FIELD QUALITY CONTROL SAMPLES

Each groundwater monitoring event will include collection of field quality control samples to aid in the assessment of overall data quality. One (1) field duplicate sample and one (1) field blank sample will be collected per monitoring event.

Field duplicate samples will be collected to estimate field and laboratory precision. Field duplicate samples will be collected by sequentially filling two sets of sample bottles at the same monitoring location, assigning unique sample numbers to the two samples, and submitting both samples to the laboratory for analysis.

Blank samples will be collected to estimate the potential for sample contamination from any materials contacting sample water (filtration equipment, bottles, preservatives etc.) and from random atmospheric contamination. The blank sample will be collected by filling sample bottles with reagent-free deionized water in the field (processed through filtration equipment for the metals sample), preserving as appropriate, and submitting the sample blind to the laboratory for analysis.

4.0 DATA REVIEW AND REPORTING

Following receipt of laboratory reports, all field and laboratory documentation and data will be reviewed for completeness based on the requirements of this SAP. Field and laboratory quality control data will be reviewed and compared with EPA-suggested target control limits. Target control limits for field blanks (both deionized water and equipment rinsate blanks) are no contaminants present above laboratory detection limits. Target duplicate sample control limits for inorganic water constituents will be as follows (EPA, 2002):

- Water Sample Duplicates (surface water and groundwater): Control limit of $\pm 20\%$ relative percent difference (RPD) for original and duplicate samples with concentrations greater than 5 times the laboratory detection limit (DL); or control limit of $\pm DL$ if the original or duplicate/split concentration is less than 5 times the DL.

Relative percent difference is calculated as follows:

$$RPD = \frac{|S - D|}{\frac{(S+D)}{2}} \times 100$$

where RPD = relative percent difference (%)
S = original sample result; and
D = duplicate sample result.

All baseline water resources data collected during 2006 will be stored in spreadsheet/database format to facilitate production of data summary tables and figures, as well as comparison with previous data (Maxim Technologies, 1996) as warranted.

5.0 REFERENCES

- Maxim Technologies, Inc., 1996. *Comprehensive Report for the Water Resources Monitoring Program: 1989-1995. Elkhorn Project, Montana.* Prepared for Santa Fe Pacific Gold Corporation. March 1996.
- Skogerboe et al., 1967. Design and Calibration of Submerged Open Channel Flow Measurement Structures: Part 3, Cutthroat Flumes. Utah Water Research Laboratory, Utah State University, April 1967.
- USGS, 1977. National Handbook of Recommended Methods for Water-Data Acquisition. Office of Water Data Coordination, 1977 (with subsequent revisions through 1983).

TABLES

Table 1. Baseline Surface Water Quality Monitoring Locations

Site ID	Description
SW-1	Slaughterhouse Gulch, upstream
SW-2	Slaughterhouse Gulch, above county road
SW-3	Slaughterhouse Gulch spring house
SW-6	Turnley Creek upstream of confluence with Elkhorn Creek
SW-9	Greyback Gulch upstream of confluence with Sourdough Creek
SW-10	Abandoned adit seepage to Greyback Gulch
SW-11	Greyback Gulch upstream of mine area
SP-1	Spring in Turnley Creek drainage

Table 2. Elkhorn Goldfields Baseline Water Resources Monitoring Analytical Parameter List

Field Parameters	Common Constituents	Metals[#]	Nutrients
pH	Calcium (1.0)	Arsenic (0.003)	Nitrate + Nitrite as N (0.01)
SC ($\mu\text{mhos}/\text{cm}$)	Magnesium (1.0)	Aluminum (0.03)**	Ammonia N (0.05)
Dissolved Oxygen	Sodium (1.0)	Cadmium (0.00008)	Total Phosphorus as P (0.001)
Water Temperature	Potassium (1.0)	Chromium (0.001)**	
Static Water Level (gw)	Carbonate (1.0)	Copper (0.001)	
Flow (sw)	Bicarbonate (1.0)	Iron (0.03)	
	Chloride (1.0)	Lead (0.0005)	
	Sulfate SO_4 (1.0)	Manganese (0.005)	
	Total Dissolved Solids (1.0)	Mercury (0.00001)	
	Total Suspended Solids (1.0)	Molybdenum (0.005)**	
	Alkalinity as CaCO_3 (1.0)	Nickel (0.005)**	
		Selenium (0.001)**	
		Silver (0.0005)	
		Zinc (0.005)	
		Antimony (0.005)**	
		Beryllium (0.001)**	
		Thallium (0.0002)**	
		Barium (0.005)**	

#Metals will be analyzed as total recoverable in surface water, dissolved in groundwater.

**Indicates parameter to be analyzed during initial sampling event only to confirm results of previous baseline sampling. Subsequent sampling will not include these parameters.

Table 3. Baseline Groundwater Quality Monitoring Locations

Site ID	Casing Diameter (in)	Total Depth (ft)	Screen Interval (ft)	Geologic Unit	Description
MW-2	4	180	40-180	Quartz Monzonite	Greyback Gulch
MW-3	4	155	40-155	Skarn	Upper Slaughterhouse Gulch
MW-5	4	125	20-125	Argillite/Exoskarn	Lower Slaughterhouse Gulch
MW-7	6	185	165-185	Quartz Monzonite	Elkhorn Well
MTHG-B	6	400	20-400	Endoskarn	Mt. Heggen Well adjacent to pit
EGI-2					

FIGURES